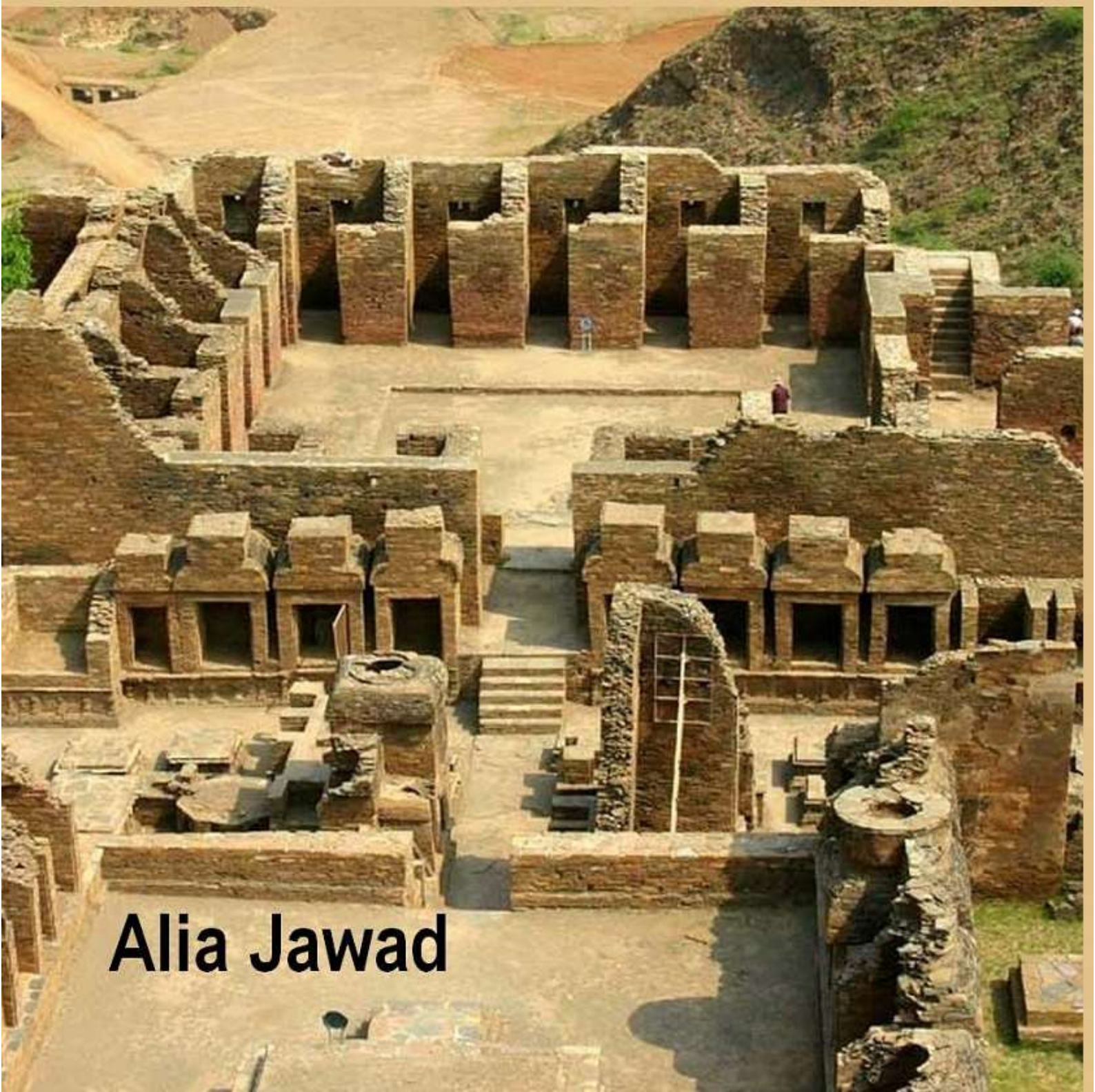
THE GANDHARAN EDUCATION SYSTEM

It's Sources, Structure & Legacy



Alia Jawad

THE GANDHĀRAN EDUCATION SYSTEM: ITS SOURCES, STRUCTURE AND LEGACY

by

Alia Jawad

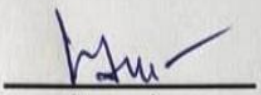
INSTITUTE OF ARCHAEOLOGY AND SOCIAL ANTHROPOLOGY
FACULTY OF ARTS AND HUMANITIES
UNIVERSITY OF PESHAWAR
2012

THE GANDHĀRAN EDUCATION SYSTEM: ITS SOURCES, STRUCTURE AND LEGACY

Dissertation submitted to the Institute of Archaeology and Social Anthropology, University of Peshawar in partial fulfillment of the requirements for the award of the degree of **Doctor of Philosophy**

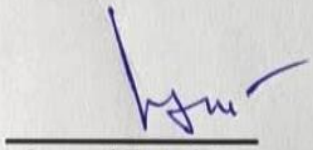
Approved by:

1. Professor M. Farooq Swati
   Institute of Archaeology and Social
   Anthropology, University of Peshawar



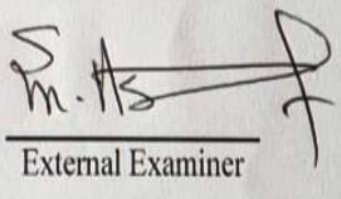
Supervisor

2.



Internal Examiner

3.



External Examiner

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FACULTY OF ARTS AND HUMANITIES
UNIVERSITY OF PESHAWAR
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CONTENTS

Acknowledgements ..... **iv**

Dedication ..... **vi**

Maps ..... **vii**

List of Tables ..... **xi**

List of Figures ..... **xii**

List of Plates ..... **xii**

List of Appendixes ..... **xvi**

Introduction **1**

1. Chapter 1: Geography and Political History of Ancient Gandhāra **7**

1.1 Historical Geography of Ancient Gandhāra **7**

1.1.1 Physical Geography of Acnient Gandhāra **9**

1.2 The Political History of Ancient Gandhāra **10**

1.2.1 The Persian domination **10**

1.2.2 Macedonian invasion **10**

1.2.3 Contributions of the Mauryan Dynasty **12**

1.2.4 The Greeks, Scythians and Parthians in Gandhāra **17**

1.2.5 The Kuśans in Gandhāra **18**

1.2.6 The Kidara Kuśans **22**

1.2.7 The White Hūns **23**

2. Chapter 2: Pre-Buddhist Education System of the University Centre of Taxila **27**

2.1 The Intellectual Legacy of Gandhāra **27**

2.2 The University Centre of Taxila: The Seat of a Scientific Education System **29**

2.2.1 The City of Taxila **29**

2.2.2 The University Centre of Taxila **30**

2.3 Teachers of the University Centre of Taxila **31**

2.3.1 The Upaniśadic Movement of Uddalika Aruni and Svetaketu Auddalaki **32**

2.3.2 Bhagavat Gītā: An Upaniśad of Bhagavats **33**

2.3.3 The contribution of Páńini **33**

2.3.4 The contribution of Kautilya **34**

2.4 The Pre-Buddhist Education System **35**

2.4.1 The courses of study **36**

2.4.2 Political Education **37**

2.4.3 Hydrology **38**

2.4.4 The environmental education 38
2.4.5 The moral education 38
3. Chapter 3: The Origin and Development of Buddhist Education System 42
3.1 Buddha as a Great Teacher 42
3.1.1 The backdrop of the Buddha's philosophy and education 43
3.1.2 Early Education of Siddharta 43
3.1.3 The Buddhist philosophy of education 44
3.2 The Development of Buddhist Education System in Greater Gandhāra 46
3.2.1 Taxila 47
3.2.2 Kaśmir 48
3.2.3 Peshawar 53
3.2.4 The Swat Valley 60
3.3 The Impact of Gandhāra Buddhism on China 62
4. Chapter 4: Gandhāran Monasteries: Curriculum and Teaching Methodology 70
4.1 The education system as gleaned from Gandhāran scriptures 70
4.2 The curriculum of Gandhāran monasteries 71
4.2.1 The Buddhist Śāstras 72
4.2.2 The courses of study 72
4.2.3 The teaching-learning discourses 75
4.2.4 The timings and the time management 77
4.3 The Teaching Methodologies 79
4.3.1 The oral transmission 79
4.3.2 Question/answer techniques 80
4.3.3 Teaching through individual differences 81
4.3.4 Reasoning and critical analysis 82
4.3.5 Teaching through parables and proverbs 84
4.3.6 The riddles and metaphors 84
4.3.7 Dialogue and debate as a means of imparting true education 85
4.3.8 The use of signs, symbols and non-verbal communication 87
4.4 Writing Culture of the Gandhāran Monasteries 89
4.4.1 The Gandhāra manuscript culture 90
4.4.2 The pens and the inkpots 92
4.4.3 The archaeological evidence 92
4.5 Meditation-The First and Foremost Component of Monastic Learning 93
4.5.1 The relevance of Mahāyāna meditation and Pre-Buddhist *Yoge* 96
4.5.2 Meditation and monastery architecture 101
4.5.3 The socio-cultural, moral and physical benefits of meditation 113

4.5.4 The behavior code through strict self control and self discipline 114
4.6 The Life Sciences..... 117
4.6.1 The pure sciences 117
4.6.2 The Psychology..... 120
4.6.3 The moral and social education of Gandhāra Buddhism..... 124
4.6.4 Moral education through *Jātaka* 127
4.6.5 The medical sciences in Gandhāra 139
4.6.6 *Vinaya* and health education..... 145
4.8 The Gandhāra Monasteries and sponsorship of the indigenous craftsmanship 148
4.9 The Role of Gandhāra Monasteries in Standardization of Rules and Empowerment of the Religious/Educational Institutions..... 161
5. Chapter 5: Disintegration and Legacy of the Gandhāran Education System 173
5.1 The Decline of Gandhāran Monastic Establishments and the Disappearance of Buddhism from Gandhāra 174
5.2 The Post 7th Century CE Spread of Gandhāra Legacy 189
5.2.1 The Sindhi Buddhism in 7th century CE..... 200
5.2.2 Muslim rule and Buddhism in Central Asia..... 204
5.2.3 The Gandhāra legacy to Far East..... 210
6. Chapter 6: Summary and Conclusions 216
Bibliographic References..... 222
Plates 271
Tables..... 306
Appendixes 315
Figures..... 317

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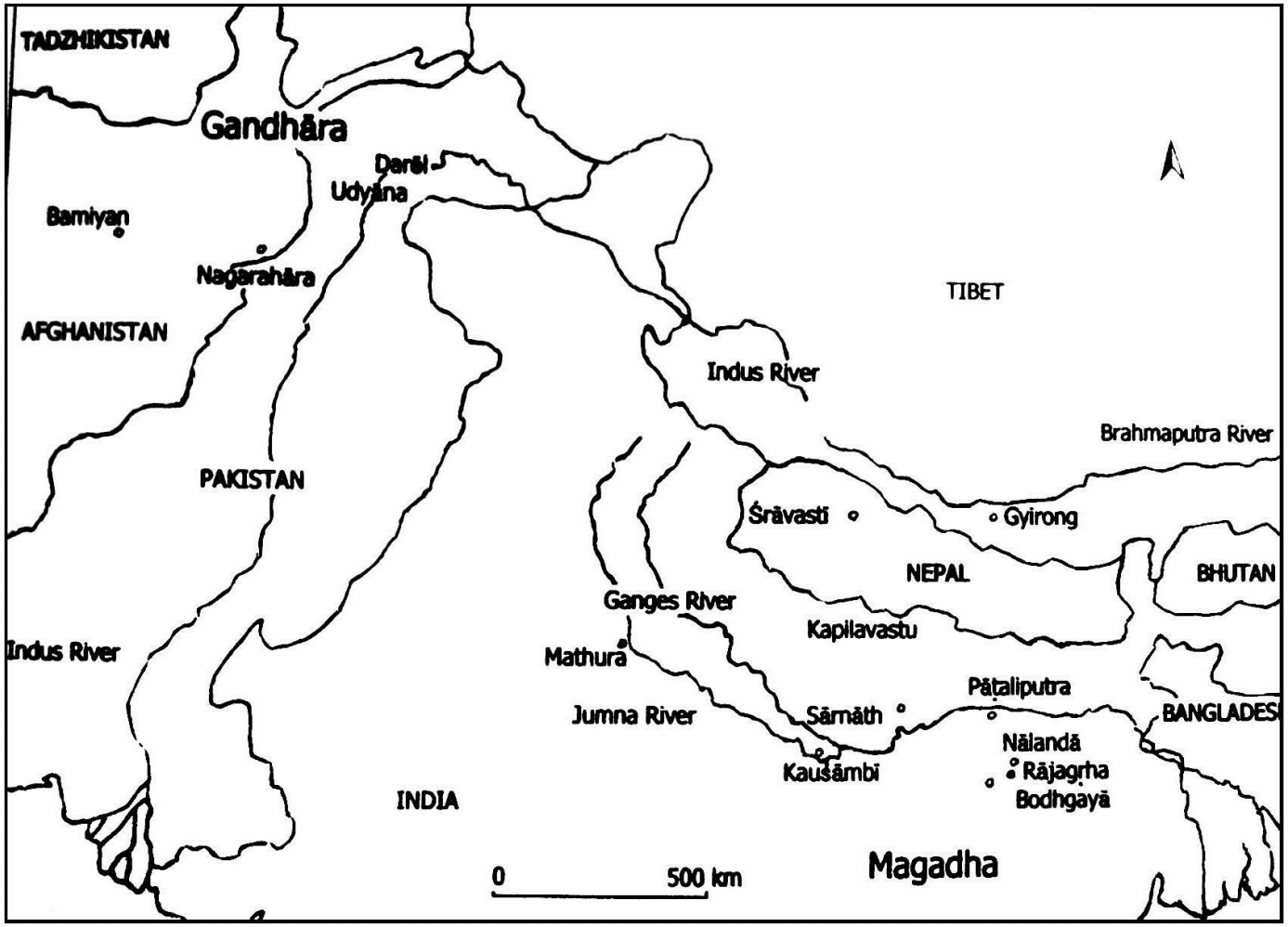
Dedication

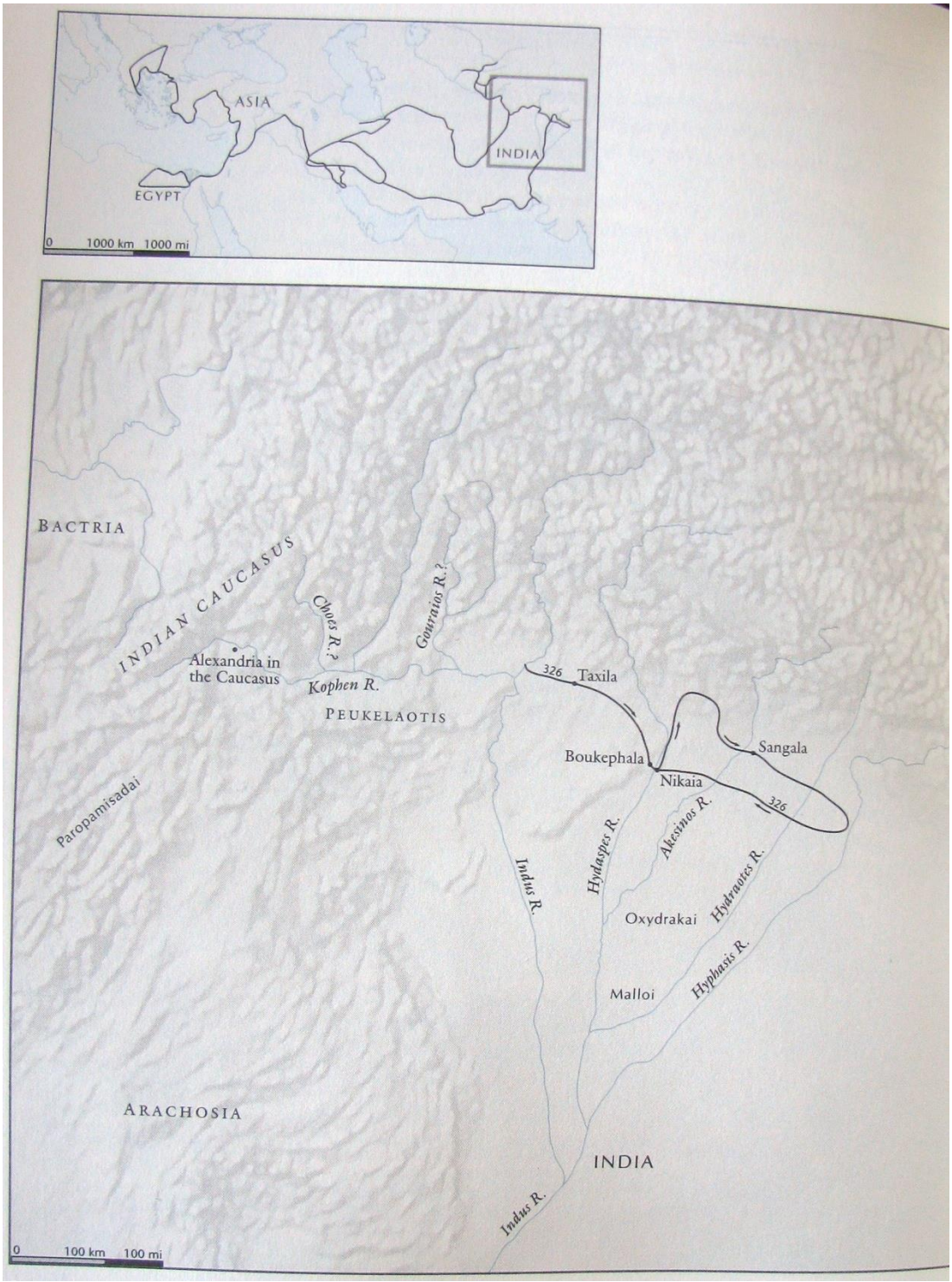
Dedicated to my sons Syed Ali Haider Kazmi and Syed Ali Hasnain Kazmi, whose mother was doing her Ph. D thesis when they needed her most in their school and personal life.



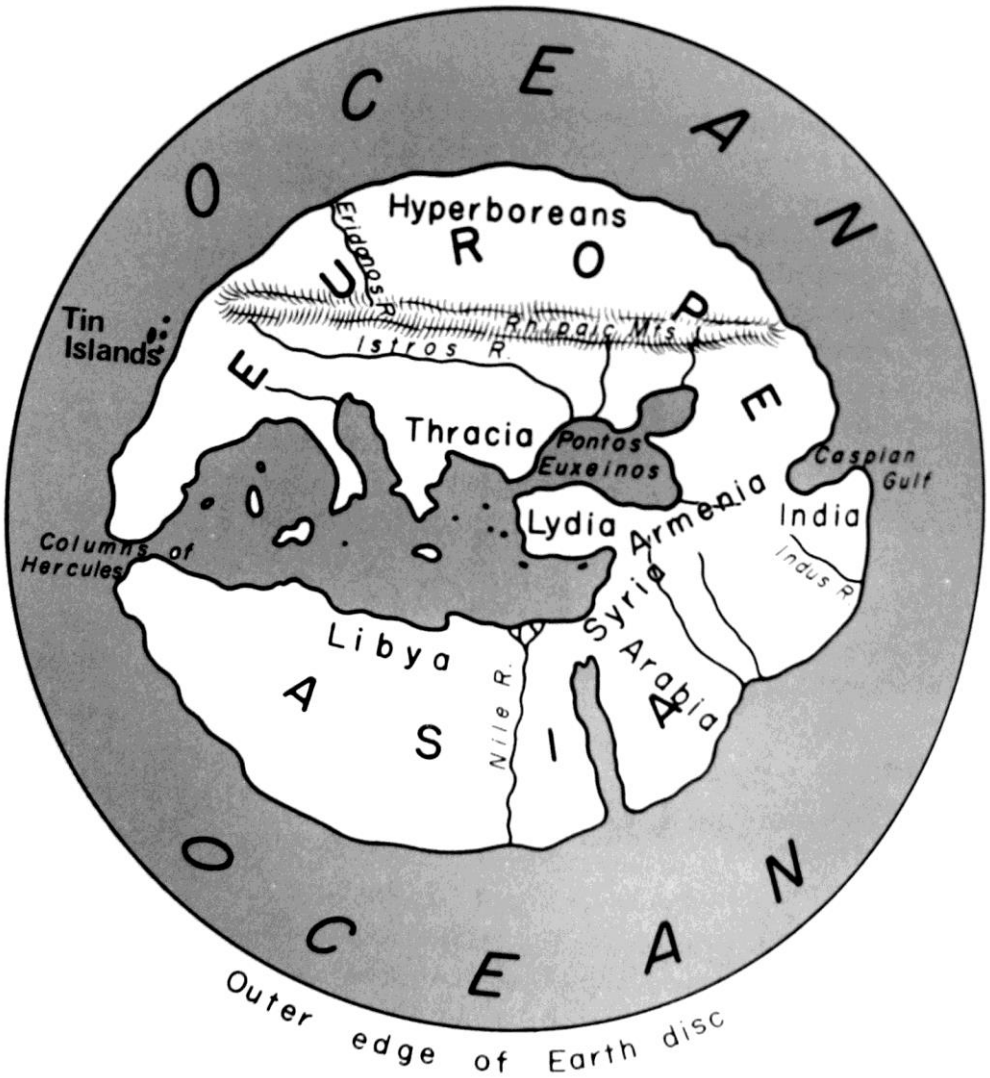
The Greater Gandhara (Source McNair 2007: Fig. 5.1)

Map 2

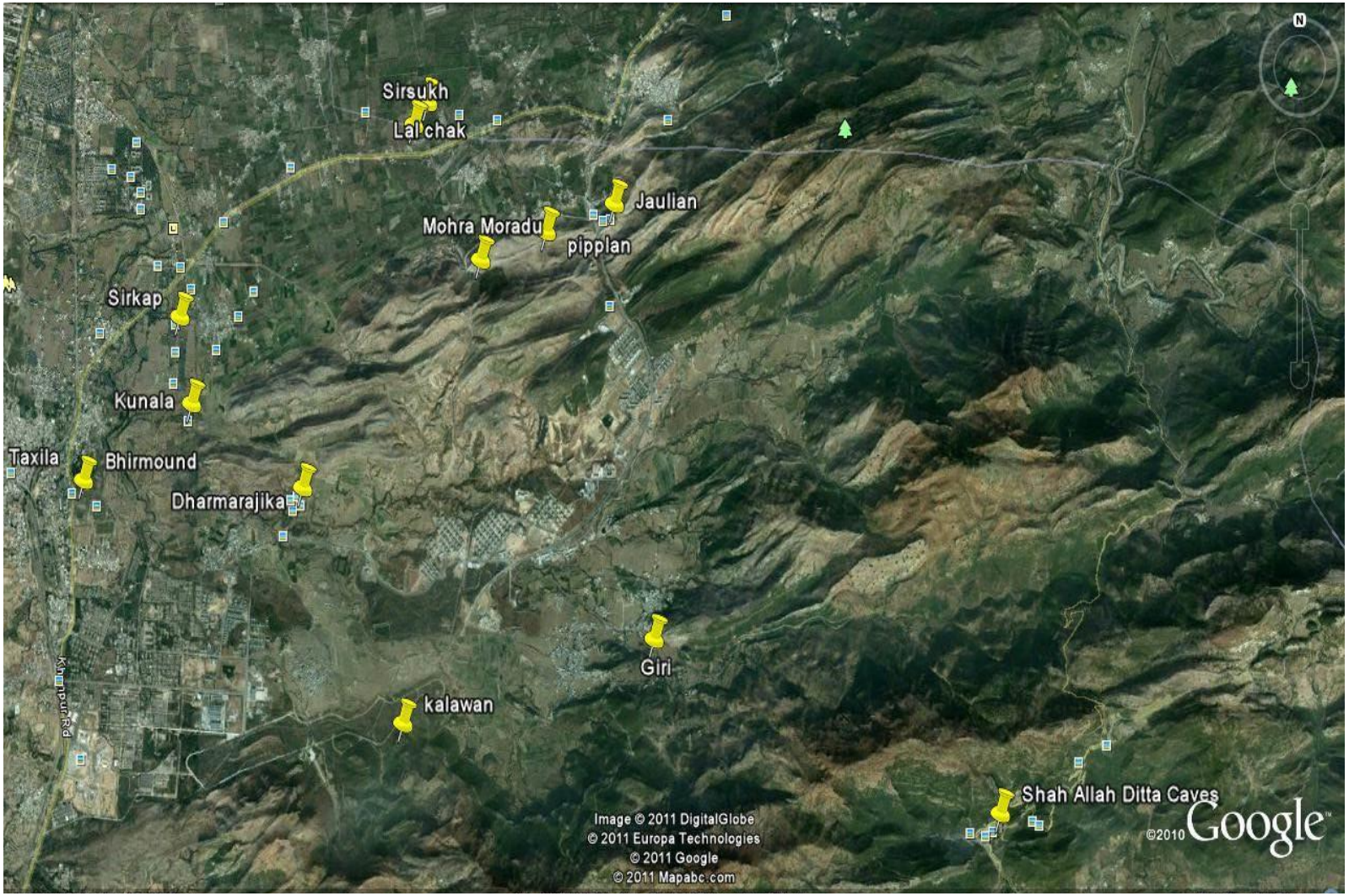
Map 1



Alexander's Invasion to India: Book V Arrian (Source Romm 2010: Map 5.5)



A Map drawn by Hekataios, 'The Father of Geography' in 500 BCE, showing River Indus (Source Majno 1975: 6.1)



The Buddhist Monasteries of Taxila

Map 4

List of Tables

Table 1: *Jātaka* Referring to the University Center of Taxila and North-western Provinces ____ **306**

Table 2: Buddha Education ____ **308**

Table 3: Siddharta Physical Education ____ **309**

Table 4: *Jātaka* Highlighting the Ascetism/Meditation ____ **310**

Table 5: The Gandhara Relief with Ascetic/Extreme Renunciation Themes ____ **313**

Table 6: Gandhāra Relief Showing the Donors and the Donations ____ **314**

List of Figures

Fig. 1: General Lay out of the Mohra Moradu Monastery _____317

Fig. 2: Bhamala Monastery showing raised platform _____318

Fig. 3: Plan of the Monastery of Jinnah Wali Dheri _____319

List of Plates

Pl. 1a. Prince Siddharta in School, Marjanai, Swat ____ 271

b. Prince Siddharta, studying from his teacher ____ 271

Pl. 2a. The scene showing wrestlers ____ 272

b. Lotus Sutra Pillar, Fa Hai Temple, Beijing, Ming Dynasty ____ 272

Pl. 3a. Drum. Fayun Si, Beijing, T'ang Dynasty ____ 273

b. Drum and Hammer, Fayun Si, T'ang Dynasty ____ 273

Pl. 4a. The Fish bells in Fayun Si, Beijing, T'ang Period ____ 274

b. Qixia Temple, Nanking, China: the monk using wooden block as a symbol for turning the page ____ 274

Pl. 5a. Aramaic Inscription built into the wall of Block F, Sirkap ____ 275

b. Earthen Inkpot ____ 275

Pl. 6a. Earthen Inkpot ____ 276

b. Metal Inkpots ____ 276

Pl. 7a. The Buddha visits an ascetic ____ 277

b. Fasting Buddha Śakyamuni ____ 277

Pl. 8a. The courtyard of Dharmarajika Monastery, Taxila ____ 278

b. Shahpur well and the rectangular water tank ____ 278

Pl. 9a. The Platform besides Shahpur Well ____ 279

b. Mohra Moradu well showing platform and the small water tank ____ 279

Pl. 10a. Manikyala Stupa Well 1: External View ____ 280

b. Manikyala Stupa Well 2: An Internal View ____ 280

Pl. 11a. Manikyala Stupa Well 2: Showing the small water tank ____ 281

b. Manikyala Stupa water pond 2 ____ 281

Pl. 12a. The Mohra Moradu Monastery, Taxila: showing the stones bases for the *veranda* pillars ____ 282

b. Pippala Monastery: showing the sunken courtyard and the wide *verandas* around it ____ 282

Pl. 13a. Jinnah Wali Dheri Monastery, Taxila: Showing the wall thickness of the monks' cells ____ 283

b. Jinnah Wali Dheri Monastery, Taxila: Showing the wall thickness of the monks' cell ____ 283

Pl. 14a. The sunken space in the wall of a monks' cell, Jinnah Wali Dheri, Taxila ____ 284

b. Passage leading to the cell with stupa in Pippala Monastery, Taxila ____ 284

Pl. 15a. The passage leading to underground meditation chamber of Syed Jamal Allah Qadri Gilani, generally known as *Zinda Peer*, Hassan Abdal, District Rawalpindi ____ 285

b. The Underground Chamber in the Tomb of Kalyam Sharif _____ 285
Pl. 16a. Mohra Moradu Cave _____ 286
b. Shah Allah Ditta Cave 2: General View, showing the arched entrances to the cave _____ 286
Pl. 17a. The raised platform in Shah Allah Ditta Cave 1, Islamabad _____ 287
b. The meditation chamber of Syed Jamal Allah Qadri Gilani, showing the raised platform _____ 287
Pl. 18a. Shah Allah Ditta Cave 2: Internal View _____ 288
b. The sitting place of *Zinda Peer* , Saidpur Village, Islamabad: showing the Gigantic Banyan Tree _____ 288
Pl. 19a. The sitting/meditation place of *Zinda Peer*, Saidpur Village, Islamabad _ 289
b. The square platform in the courtyard of Mohra Moradu _____ 289
Pl. 20a. The walled structure in the south-eastern corner of court of cells, Takht-i-Bahi Monastery, District Mardan _____ 290
b. The square structure lying above a votive stupa in south of the stupa court, Takht-i-Bahi _____ 290
Pl. 21a. The preserved meditation square plate form in the north-eastern corner of Kalyam Sharif _____ 291
b. The preserved square seat of Baba Kalyam Sharif _____ 291
Pl. 22a. The preserved meditation (square) seat of Baba Abdus Sitar Chishti, Kalyam Sharif _____ 292
b. The lowered courtyard, Monks' Quarters, Qixia Temple, Nanking _____ 292
Pl. 23a. Surgical Instruments, Sirkap _____ 293
b. The Dining Hall of Qixia Temple, Nanking, Beijing _____ 293
Pl. 24a. The decorative band, revealing the stone imitation of wood carving, Nimogram, Swat _____ 294
b. The schist stone reliquary _____ 294
Pl. 25a. The electric lathe machine. Modern town of Tibian, Taxila _____ 295
b. The traditional measuring tool for the circular objects, Tibian, Taxila __ 295
Pl. 28a. A Stone Worker at the Modern town of Tibian, Taxila_____ 296
b. A Stone Worker Preparing the stone replica of Gandhara relief: Modern town of Tibian, Taxila_____ 296
Pl. 27a. The stone engraving: Modern town of Tibian, Taxila. _____ 297
b. The modern tools used for delicate relief carving: Modern town of Tibian, Taxila._____ 297
Pl. 28a. The thick plaster on walls of a monastic cell, Badalpur, Taxila _____ 298
b. General view of Mohra Moradu Monastery_____ 298

Pl. 29a Ritual Incense Burner _____ 299
b. Reliquary in the form of stupa _____ 299
Pl. 30a. Bipartite pendant with Erotes on sea creatures _____ 300
b. Dipankara *Jātaka* _____ 300
Pl. 31a. Molds for inlay on jewelry _____ 301
b. Jewelry mold. Sirkap _____ 301
Pl. 32a. Gold smith's anvils. Sirkap _____ 302
b. Gold smith's tongs and anvils. Sirkap _____ 302
Pl. 33a. Gold smith's tools in the modern city of Taxila _____ 303
b. Relief Panel showing donations carried by monks and laypersons _____ 303
Pl. 34a. Donor. Gandhara _____ 304
b. BK-III. Śyāma *Jātaka* _____ 304
Pl. 35a. *Caitya arches* in Gandhāra relief _____ 305
b. Wooden door jambs in Gandhāra relief _____ 305

List of Appendix

Appendix 1: The Analysis of 'Oneness Philosophy' for its Didactic Component _____ **315**

Appendix 2: The Wooden Writing Boards _____ **316**

THE GANDHĀRAN EDUCATION SYSTEM: ITS SOURCES, STRUCTURE AND LEGACY

INTRODUCTION

The present research is a case-study of Gandhāran education system, which has not been investigated into so far, prevailed in ancient Buddhist region of Greater Gandhāra (in Pakistan) for over a millennium, i.e., from 6th *c.* BCE to the 10th *c.* CE (see Map 1). Being one of the essential components, strongly founded education system contributed to the integrity and prosperity of the Gandhāran Civilisation. It catered for the spiritual as well as secular needs of the society. It advanced technology and other fields of knowledge which brought economic prosperity and political stability—as evident from the remains of hundreds of monuments, works of art, coins and epigraphs. Using all available historical and archaeological sources, we have made an effort to analyse the structure of the education system and trace its legacy. Although considerable work has been carried out in India in this connection, (Cochrane 2009; Dutt, N. 1980; Karey 1918; Majumdar 1953; Mookerjee 2003; Plofker 2009; Reagon 2005; Sankalia 1934; Seeley 1899, etc.), in Pakistan this kind of work has not been initiated as yet. The present study is a pioneering work and, we hope, it would pave way for similar researches in future.

It is beyond the scope of the present work to inquire into almost all existing branches of religious and scientific knowledge of the Buddhist Period. However, we have limited ourselves to the sources, structure and legacy of the prevailing education system in ancient Gandhāra. The picture of the education system in Gandhara monasteries has been pieced together from various types of evidence. The present model is partially based on literary sources and supported by the archaeological data, inference and analogy. Evidence provided in various disciplines together with a much expanded body of artistic, architectural and textual material has been utilized in the present study. The research was conducted in Pakistan, China and USA to collect the essential data.

The objectives of the study were to:

1. Highlight the relationship of pre-Buddhist and the Buddhist education system in Gandhāra.

2. Bringforth the intellectual and social contributions of the Gandhāra teachers.

3. Maintain the major characteristics of the formal and informal education system in Gandhāra and its impact on other countries of Asia.

4. Pinpoint the major causes of the decline of Gandhāra monasteries.

Education, one of the basic constituent elements of civilization, has been variously defined by scholars (Das, S. 1980:110). It is a measure of social progress and the spirit of all human developments. It is a means of transmission of culture through initiation and instructions, through parents or the religious and secular institutions; the language and the lore, arts and technology, and through morals and manners (Durant 1954:3). Its decline sets-in disintegration of the society. The education of citizens and rulers was the most important element in creating the ideal state and the ideal individuals. The education of rulers was considered a key to the state craft. It helped organizing the society in two ways: (1) correct placing of an individual in the social hierarchy, and (2) assuring the right relationship among faculties of the human mind.

The present study shows a continuity of intellectual legacy from the *Vedic* Period (1500 BCE) to the 7th *c.* CE in Gandhāra. The earliest parts of *Ṛgveda*[1], some redactions of *Mahābhārata*[2], the Páṅini's *Astadhyāyi*[3], the Kautilya's *Arthaśāstra*[4] were first written at University Centre of Taxila. The Pre-Buddhist and Buddhist treatises were written with scholarly acumen at par with modern concepts of proper citations. The original authors along with their contributions are mentioned judiciously. For instance, the Brāhmana texts quote the earlier *samhitas,* or the *Upaniśads* and the *sūtras* quote all the preceding texts (Witzel 1997: 317). Kautilya mentions the previous schools of politics along the Indus Basin. The study also highlights the teaching-learning processes and some details of primary and higher education in the Páṅini's *Astadhyāyi* and the Kautilya's *Arthaśāstra,* and in the travel accounts of the Chinese pilgrims; the courses of study and the didactic components as gleaned from these *śāstras*.

The Gandhāra education system firmly based on the Buddhist culture thrived for several centuries. The Māhayāna order of Buddhism gave a new impetus to the education of monks and the laity. The chronicles of the Chinese pilgrims attest to the highest intellectual abilities of the Gandhāra teachers, the Buddhist learning and the practical arts. They variously describe the Buddhist teachers from Taxila, Kaśmir, Peshawar and other parts of Gandhāra (Gupta 2002:90; Salamon 1999:178; Walser &

Walsh 2008:21). The *Abhidharma*[1] traditions in the Chinese translations further attest the existence of intensive intellectual activities in Gandhāra.

The study also dealt with the craftsmanship of Gandhāra, as strong craft-guilds provide earning opportunities to a wider population. Architecture was considered a sacred craft since the *Vedic* Period onwards. A well organised and closely supervised institution must have been responsible for huge building projects of Gandhara monasteries. The study highlighted that the Gandhāran architecture was environmental friendly in terms of landscaping, layout, choice of material and a due consideration for proper ventilation, lighting, drainage, and hydrology—aqueducts and cisterns. The structural stability and the rules for health and privacy have also been extensively studied by the archaeologists. The great refinement in masonry techniques, building techniques, plastering, architectural decoration and painting bespeak of the refined and widespread craftsmanship throughout Gandhāra (Faccena, Ahmad Nabi Khan and Ihsan H Nadiem 1993:90; IsMEO 1980:215; Marshall 1936:172; Olivieri 2009: 265; Rahman 1993: 110; Spagnesi 2006:161).

The Buddhist texts refer to the creative arts, craftsmanship, scribing and similar fields of knowledge. The craftsmanship was attained through informal apprenticeship. The highest degree of excellence, observed in the Gandhāran stupa and monastery architecture, indicates the highest professional skills of the architects, the craftsmen and the artists. The Jataka also speak of the guild and the local craftsmanship (Dar 2007:51; Faccena & Giorgio 1962; Spooner 1912; Marshall 1931; 1951). The craft of making glazed brick and glass tiles had reached to the highest mark. The glass tiles executed in different colours were recovered from the early twentieth *c.* excavations at Dharmarājika, Taxila and Sahr-i- Bahlol (Marshall 1916:18; 1915:112; Swāti 1997:249 f.).

The study also maintained that the Buddhist philosophy of education focussed on the holistic personality development. It catered for both the educated and the uneducated. It not only focussed on the highest intellectual ability of the monks, but also on the behaviour code of the common masses. The Gandhāran reliefs depicted *Jātaka* were put on stupas as an essential component to teach lessons in morality to the society (Salamon 1999:35).

The present dissertation contains forty one plates, seven tables, four maps, three figures, one annexure and six chapters. Chapter 1 "Geography and Political History of Ancient Gandhāra"deals with the intellectual legacy of Greater Gandhāra and elaborates several scholarly contributions originating or developing at the ancient centres of learning in Taxila, Peshawar, Swat Valley and Kaśmir, that has previously been largely described under the generic term 'Indian'. Chapter 2 "Pre-Buddhist Education System of the University Centre of Taxila"highlights the intellectual contributions of the teachers of the University Centre of Taxila, with special reference to the oldest parts of *Ṛgveda, Mahābhārata*, Upanishads and the Bhagavat Gītā. It suggests that the high intellectual legacy of the University Centre of Taxila laid basis for a number of pedagogies and courses of studies at Gandhara monasteries. Chapter 3 "The Origin and Development of Buddhist Education System"is the major chapter of the present study. It elaborates the role of Buddha as a Great teacher. It also highlights the Buddhist philosophy of education revolving around proper behaviour codes. The chapter discusses the educational role of Gandhara monasteries, the Gandhāra teachers and the treatises in first few centuries of Christian Era, with Taxila, Kaśmir and Swat as major centres of Buddhist education system during Kuśan Period. Chapter 4 "Gandhāran Monasteries: Curriculum and Teaching Methodologies"highlights that the Buddhist Monasteries were a potent agent for a positive social change, in the Christian Era. The Buddhist scriptures comprised chapters, section and the sub-sections; the titles and sub-titles; the introduction to the treatise, including the rational of the text, the statement of purpose and conclusions. The subject matter was detailed in prose, question-answer and poetic formats. The oral transmission and memory development strategies were instrumental to train the human mind. The advanced teaching methodologies like mnemonics, riddles, dialogue and debate were in vogue. The chapter describes several courses of study including the meditation, the pure sciences, the social sciences and the craftsmanship. The moral education was carried out through *Jātaka*, the relief and the scriptural lore (Mookerji 2003:338).Chapter 5 "Disintegration and Legacy of the Gandhāran Education System" enlists the major causes of disintegration and decline of the Buddhist education system and its relationship with overall decline in the society. The Gandhāran education system collapsed with the academāic impotency of monasteries that set in gradual decline of Gandhāran Civilisation (Biswas 1973; Dutt 1962). The chapter analyses the compound effects of the external factors, e.g., environmental and social factors, along with the inherent structural weaknesses and some elements in doctrine that initiated decay. It also discusses the Post-7th *c.* CE educational-drift from Gandhāra to Lower Indus Valley, the Muslim World and to the Far Eastern countries. The chapter surmises by enumerating conclusions and

recommendations for further similar researches. Chapter 6 “Conclusions and Recommendations” surmises the thesis and provides recommendations for similar future researches.

CHAPTER 1

GEOGRAPHY AND POLITICAL HISTORY OF ANCIENT GANDHĀRA

This chapter provides an overview of geographical and historical profile of ancient Gandhāra. It also highlights the role of Silk Route in the dissemination of knowledge across Eurasia.

1.1 Historical Geography of Ancient Gandhāra

Gandhāra is first mentioned in *Ṛgveda* (2nd millennium BCE) that was situated in the country of seven rivers, called *hepta hindu* in *Avesta* and *sapta sindhava* in *Ṛgveda*. The *sapta sindhu* also included the *nishadh,* i.e., the eastern slopes of the Hindukush Mountains (Toshkhandi 2002:76; Vassiliades 2000:6). The geographical focus of the *Ṛgveda 3* and *Ṛgveda 10* was the *sapta sindhu*, roughly from River Kabul to the River Sarasvati (Southworth 1997:266-277). *Ṛgveda.10* includes an entire hymn the '*nadi stuti*' devoted to the Rivers *Kubha* (Kabul), *Suvastu* (Swat), *Krumu* (Kurram), and *Gomati* (Gomal) flowing through Afghanistan and Khyber Pakhtunkhwa, along with the *Sindhu* (Indus) and *Vitasta* (Jhelum) in the Punjab, and the *Marudviriddha* flowing in Kaśmir. The *Ṛgveda* Sarasvati referred to the modern dried banks of *Sarasvati, Ghaggar* and *Hakra*. The *Ṛgveda* hymns describe that the sacred and secular knowledge of the Aryans was acquired along the banks of the Indus and *Sarasvati*, the 'best of mothers' (Das, A.C. 1980: 368; Rajesh 1999: 262; Watters 1904: 138).

The National Epic *Mahābhārata* was composed when Aryans were living in the Indus Basin. The epic reveals that the Indus Valley was already well established when Aryans first reached the country *(*RV2.12; RV 8.24; Shendge 1977). *Ramayana* mentions *Gandhāra visaya* where Bharata founded the city of Taxila in 8th *c.* BCE (Jansen 2009:27). The *Páńini's Astadhyāyi* describes Gandhāra as a kingdom (*janapada*), and Taxila as the capital of the kingdom (Rhys 1999:28).

The Persians used the word *hepta hindu* for the lands beyond the River Indus. *Hepta hindu* is mentioned in the famous geographical chapter of*Avesta* among 'the Earliest Creations of Ahura Mazda'. The rock inscription of the tomb of Darius-I lists Gandhāra among the tributary provinces of the Persian Empire (Herbert 1893: 146). The Greeks borrowed the term from Persians, and used it for the areas East of Indus. Alexander traversed the regions of River *Kolpen* (Kabul) and River Indus, and their tributaries (Eggermont 1993).

The *Gandaire* of the Greek historians comprised of the territory of lower valley of the River Kabul, Mohmand Agency, Swat, Bajaur, Buner and parts of Kohat. Hecataeus of

Miletus (549-468 BCE) refers to *Kaspapyros* (*Kaśyapapura*, i.e., Kaśmir) as a Gandhāran city in the 6th *c.* BCE. Aurel Stein identifies the 'Land of Pactyce' of Herodotus with the territory of Gandhāra, with Peshawar its capital (Mc Crindle 1979: 3). Strabo mentions Gandhāra as *Gandharitis* that was among the most fertile lands at that time. Gandhāra was famous among the Greeks as a country extremely rich in gold (Beal *n.d.*a: 30; Majumdar 1960: xvi; Vassiliades 2000: 25).

Anguttra Nikaya describes the Gandhāra territory as one of the sixteen great kingdoms (*solasa mahājanapadas*) in the 6th *c.* BCE, roughly covering the entire Afghanistan, Jammu (ancient *Dharva-Abhisar*), Kaśmir (ancient *Sarada Mandala*) and Taxila territories (Aryan 2002: 13; Gupta 2002: 89; Hānda 2002: 57).

The Chinese resources club Kaśmir and Uḍḍiyāna together in the term *Jibin*. The chronicles of the Han Dynasty (206 BCE-220 CE) locate *Jibin* to the west of Indus and to the south of Hindukush Mountains, i.e., the lower reaches of River Kabul and its tributaries, including Kapiśa, Gandhāra, Taxila, Uḍḍiyāna and some other kingdoms. The term Jibin originally referred to Uḍḍiyāna or Gilgit, but it was gradually extended to whole northwest by about 4th *c.* CE (Li, Chongfeng 2012: 18; Li, Congfeng 2008:25). *Jibin* was called Jimi in *Waiguo Shi* (Records of Foreign Countries) by the monk Zhi Sengzai (4th *c.* CE). Gandhāra and Kaśmir (*Kipin*) has been shown as one in the Buddhist literature and also in some Chinese sources, e.g., the Apostle Madhyantika was deputed to *Kapin-Gandhāras cha* (Watters 1904: 199). Moreover, the Ceylon chronicle Mahavamsa clubs Kaśmir and Gandhāra together in one chapter, entitled as 'Kaśmir-Gandhāra'. I-Ching mentioned that the word 'Hindu' is used for Northern tribes. Other people do not know this name (Friedrich & Max Muller 1896: lii). The Chinese chronicle called the River Indus as *Hsein-tou*. Huan Tsang used the term *Indu* as a corrupted form of *Sindhu* and also *Hsein-tou* for the same, and the term *Kan-t'o-lo* for Gandhāra or *Kan-t'o-wei*, i.e., *Gandhavat*. In ancient Japanese sources the Indus Valley is called as *INDO* (Beal *n.d.*b: 30; Goryacheva 2002:50; Jansen 2009:27).

1.1.1 Physical Geography of Acnient Gandhāra: **Geographically Gandhāra is a triangular piece of land, comprising the Indus Valley in east, the mountainous region in the west, Safed Koh in South,the Kohat Mountains upto the northern borders of the Swat Valley, and the high ranges of Hindu Kush in north. The exact boundaries of the ancient Gandhāra region are difficult to define, however, it is believed to have included the River Oxus and Kabul, Peshawar Valley, and the areas of Dir, Bajaur, Swat, Buner and Taxila during first few centuries of the Christian Era. In ancient geographical context, the term Gandhāra refers to the entire Peshawar Valley in Khyber Pakhtunkhwa.**

However, in terms of broader cultural similarity, especially, in art-forms, or political or administrative limits, its expanded territory is referred to as Greater Gandhāra—comprised of Peshawar Valley, Swat, Taxila and Afghanistan. The universe of the present study is Greater Gandhāra (Map 1). Historically Gandhāra served as a gateway to ancient India. It remained an important meeting place for three trade routes, i.e., India, West Asia and Central Asia (Jansen 2009: 28; Verma *n.d.*: 38).

1.2 The Political History of Ancient Gandhāra

Although human culture in ancient Gandhāra is traced back to the Palaeolithic Period, it evolved in due course of time through the Neolithic revolution to the Indus Valley Civilization in the third millennium BCE. After decline of the Indus Civilization, the Aryans, a branch of the Indo-Europeans, entered Anceint Gandhāra and a new culture started to flourish on the soil from the mid second millennium onwards. Continuing as such provinces on the western border of South Asia, such as Gandhāra, Arachosia Gadrosia and others fell to the Persian Empire at the end of the 6th *c.* BCE. The Macedonian invasion in 327 BCE brought an end to the Persian rule and in 321 the Mauryan Empire emerged which continued till the advent of the Bactrian Greeks in 190 BCE.

1.2.1 The Persian Domination: The Persian chronicles frequently refer to Gandhāra. The Achaemenians ruled over Gandhāra and Sindh in c. 5th and 6th centuries BCE. Gandhāra formed the nineteenth, while Aria (Herat) and Arachosia (Kandahar) the twentieth satrapy of their empire. Gandhāra provided the largest tributary to the Achaemenians and was the only satrapy that paid its tribute in gold (Cunningham 1963:22). The first book that refers to Gandhāra is *Ges Periodox* of the Greek sailor Scylax, who was sent by Darius-I c. 517 BCE to explore course of the Indus.

1.2.2 Macedonian invasion: Alexander of Macedonia put an end to the Achaemenid Empire at the end of 4th *c.* BCE (Bopearachchi & Aman-ur Rehman 1995:22). Strabo mentions Gandhāra as *Gandharitis* when describing the route of Alexander from River Kabul and its tributary Kunar (Map 2 & 3; Majumdar 1960: xvi; Mc Crindle 1979: 31, 1984: 86).

Archeologically, Taxila is an important urban site in Gandhāra. Its history goes back to at least 3100 BCE, i.e., the Neolithic Period. The remains of a small village were found at Sarai Kala in the mid 4th millenium BCE. Later on it was occupied by Kot Dijjian Culture (2800-2400 BCE). The remains of three Buddhist cities and several monasteries have also been excavated. The Mauryans, the Indo-Scythian, Parthians, Bactrians,

Kuśanas and the Hūns all reigned from Taxila. The monasteries yielded an appreciable amount of information for the reconstruction of social and cultural history of Gandhāra (Map 4; Callieri 1988: 60; Marshall 1975: 3-8).

Taxila was a rich flourishing city at the time of the Macedonian invasion and a seat of intellectual learning. Alexander first halted at Taxila when he crossed the Himalays and reached plains of the Punjab (Cunningham 1963: 5). Plutarch reports that the Empire of *Taxiles* was as large as Egypt, governed by good law, thickly populated and had a very fertile soil with good pastures. The Capital of the Empire, i.e., the Taxila, was considered by the Greeks as the largest city lying in between the River Indus and Jehlum (Śāstri 1957).

Due to the decline of Buddhism in this area at about 5th *c.* CE, the city of Taxila lost its glamour and the economic basis of its existence. Dar (1998) remarks that the archaeologists and the historians did not show interest to what happened to Taxila after the invasion of White Hūns in 456 CE. When Huan Tsang visited it in the 7th *c.* CE, it was a dependency of Kaśmir. The Royal family was extinguished and the chiefs were in open feud to each other. Hundreds of Buddhist Monasteries, with thousands of monks were still alive, but monks were defective in *Dharma* and devoid of learning. It also existed at the time of Mahmud of Ghazna, during Saltanate Period and possibly even later. Marshall discovered a number of Akbar's coin, but these were not properly reported (Ingholt 1957: 13; Williams 2009: 165).

1.2.3 Contributions of the Mauryan Dynasty: **The *Dipavamsa*[1], dating back to 4th *c.* CE, *Mahavamsa*[2], about a *c.* later, and the *Aśokevadana*[3] in *Sanskrit,* Chinese, Tibetan and Ceylon chronicles in Pali language contain information on the Mauryan Dynasty. Taxila was the capital of Gandhāra at the Mauryan Period. The Brāhman Chanaka, generally known as Kautilya, whose efforts led to the establishment of the Mauryan Empire, was a resident and a teacher at the University Centre of Taxila. He educated Chandragupta in humanities and in *śilpa,* i.e., various arts and crafts including military skills and prepared Chandragupta against the Greeks (Gour 1929: 201). The army of Chandragupta against the Greek General Seleucus Nicotar was composed of the republican people of the Punjab. Baudhāyana in his *Dharmasūtra* (*c.* 400 BCE) describes the Punjab as the country of Arrattas. These tribes were mostly from the**

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[1] The oldest historical records of Śri Lanka

[2] Considered to be the most important historic records of Ceylon

[3]The legends of Aśoke

Punjab and Frontier Provinces. They were engaged in the war waged against the Greeks (Śāstri 1957).

Chandragupta reigned over the Provinces of Sind, Punjab, Kathiawar and Gujarat. Chandragupta's Kingdom was a strong, widespread and centralized state in a previously Republican India with petty kingdoms. He maintained friendly relations with Greeks. Seleucus-I made a treaty with Chandragupta (Bopearachchi & Aman-ur-Rehman 1995: 22). Bindusara the son of Chandragupta Maurya, is infrequently mentioned in the Buddhist chronicles. Bindusara is said to have appointed his two sons Susima (or Sumana) and Aśoke as Viceroys of Taxila and Ujjain, respectively. The revolt at Taxila could not be suppressed by Susima, so Aśoke replaced his brother at Taxila and successfully dealt with the revolt. An Aśoken inscription in Aramaic characters was discovered at Taxila. Nonetheless, the Buddhism gained its first impetus in Gandhāra at the time of King Aśoke (Hānda 2002: 59; Salamon 1999).

The political history of Aśokan period has been mostly drawn from *Puranic* accounts and *Aśokevadana,* transalted into Chinese and Tibetan languages. The historic evidence to Aśoke's policies comes through Aśoke's Rock Edict. Aśoke Virdhan, generally known as Aśoke was a Governor of Ujjaini at the time of death of his father. His biography relates that he turned to Buddhism after the campaign of Kalinga, in the ninth year of his reign. The Aśoken Rock Edicts in Gandhāra are found at Shahbazgarhi, in Mardan District and Mansehra in District Hazara, on an ancient road leading to an ancient place of pilgrim called as Breri (Hunter 1986: 43; Rhys 1999: 280).

The stupa worship took its definite form at Aśoke's time and possibly played an important role in controlling the religious concepts of the people. The Rock Edicts proclaim that Aśoke advised the monks on their reading matters, and purified the monastic order by expelling the erring monks (Stein 1989: 355; Williams 2008: 10; Williams 2005).

Aśoke established a new department for the sake of moral and spiritual welfare of the people. The officers of the department were called as *Dharma-Maha-Matras*. The department also sent out some ambassadors as 'Dutas' to other countries, carrying the religious messages. The department was also responsible for public welfare works like making hospitals, supplying the medical practitioners, and supply of drinking water and rest houses for the travellers, etc. He remitted taxes from those who had consecrated their lives for the service of men. The Aśoke's Road from Pataliputra to Indus through Taxila was the forerunner of the Sher Shah Suri's Grand Trunk Road of the mid

sixteenth *c.* CE. Distances were marked at intervals of ten *stadia,* or half a *kos,* about a mile and a quarter. Aśoke added a well besides each pillar and planted shade and fruit trees, rest houses and shed supplied with drinking water. Taxila and Ujjain are mentioned in Kalinga Provincial Edict. Taxila probably controlled Kaśmir at Aśoke period (Gour 1929: 506; Mookerjee 1955: 30).

Prakash (1976: 208) mentioned that the people of Taxila were headstrong. However, Aśoke handled them successfully as a Governor and, later as an Emperor. He established a system of official tours to the provinces. In Ujjain and Taxila, the tours were conducted every three years, while in other provinces every five years. Aśoke appointed his son Kunala as Governor of Taxila. Fa Hien mentions that Gandhāra was formerly governed by *Fa-ya,* i.e., *Dharmavivardhana,* or Kunala. He describes flock of people visiting the tope that commemorated the spot at *Tchu-sha-si-lo* (Taxila) where Kunala gave his eyes (Beal *n.d.*a: 33; Mookerji 1955: 57).

The Third Council was held at the reign of Aśoke at Pataliputra about 244 BCE. The Council decided to propagate the faith by missions and emissaries were sent by Tissa to Kaśmir, Gandhāra, the Himalayas (Nepal or Tibet), the borderland on the Indus, the coast of Burma, South India and also to Ceylon (Rhys 1881). The first missionary to Ceylon was Aśoke's son Mahendra, assisted by his sister Sanghamitra. Her name is still remembered in Śri Lanka. Mahendra settled down in Ceylon and died there in 204 BCE. The Aśoken Rock Edicts mention emissaries to Antiochos-II Theos the Seleucid, Ptolemy-II Philadelphus of Egypt, Antigonas of Macedonia, Magas of Cyrene and Alexander of Epirus. The Ceylon sources mention that four missions were deputed to the Northwest regions of the Aśoke's Empire Majjhantika, the Kaśmiri monk scholar was selected to lead the most important mission to Gandhāra in the Northwest. Maharakkhita proceeded to the country of the *Yonas*, possibly the Bactrians. Aśoke, being aware of the strategic position of the Northwest regions as a meeting point of civilizations, deputed missionaries to subdue these sensitive areas religiously and diplomatically (Basham 2005: 60; Hānda 2002: 60; Karttunen 1994: 329).

Māhāsañghikas (the Greater Community) were the opponent to the Stheviravada, since the first schism occurred at the 'Second Council', held at Pataliputra in 346 BCE. They broke away from Theravada tradition of Buddhism after the Third Council. According to the traditions the Council gave rise to seven or eight sub-schools of Buddhism (Call & Indira 1997). Conze, E (1951) is of the opinion that the Māhāsañghikas became the starting point of the development of Māhayāna due to their liberal attitude. The worship

of stupa was possibly originated by them, who maintained that the great religious merit could be acquired even by a single circumambulation of stupa.

Throughout history, ideas and technologies have spread along trade routes, and the merchants have been among the prime transmitters (Foltz 1999: 6). The inter- and intra-regional links thus established through trade links transmitted the commodities and the religious doctrines from Gandhāra to other cultural zones. The Silk Road stretched 7000 miles from China through Central Asia, Gandhāra and the Parthian Empire to the Roman. It was not one, but composed of network of routes, generally going from east to west, but with spurs into southern Iran, the northern Eurasian steppe, and south over the Hindu-kush to the Indian subcontinent (Elisseeff 2000; Duiker, Jackson & Speil 2008: 193).

The Silk Road was initially opened up by Darius-I as an imperial highway for commercial and military purposes in the Indus Region and across Taxila to India. Chandragupta further developed the existing trade routes and strengthened diplomatic contacts by having ambassadors from the neighbouring states in his court, such as Magesthenes and later Deirnachas as representative of Seleucus; Dionysius as envoy of the king of Egypt, Ptolemy-II Philadelphus. The contacts paved way for subsequent trade links during the Aśoke and Kuśan Periods (Behera 2002; Derrett 2006: 236).

Although Aśoke introduced Buddhism to Śri Lanka in *c.* 250-210 BCE, their cultural and trade links with Gandhāra are recorded well before his time. The punch marked coins of the 3rd *c.* BCE, found everywhere in the island, were imported from Northwestern Provinces. The lapis lazuli beads and intaglios were brought from Gandhāra and Afghanistan. There is direct evidence that the Tibetan Monasteries were involved in trade activities. The island was known to the people of Indus Valley in 4th *c.* BCE. Onesicritus of Astypaleia, and Alexander's commander, took the information of *Toprobana* (Śri Lanka) from the people of Gandhāra. D.P.M.Weerakkody (1997) points out that the early migrants to Śri Lanka belonged to eastern and western parts of Northern India.

***Aśokevadāna,* narrates Aśoke's high devotion to the Buddhist stupas and monasteries. He availed enormous sums in erecting the costly buildings for Buddhism. His Brāhman ministers blamed him to waste the precious resources of the Empire and forcefully removed him from the power and placed Samprāti, the son of legendary Kunala, on the throne (Smith 1999a: 192). Nothing is known for sure about Aśoke's death or date of his**

death. However, Gour (1929: 205) suggested that Aśoke's death probably occurred at Taxila.

The political power transferred to Jainism and Śaivism after the Aśoke's death. Samprāti was possibly more inclined to Jainism, rather than Buddhism. Almost all ancient Jain temples or monuments were ascribed to Samprāti. Jalauka, another son of Aśoke, the energetic king of Kaśmir traditions, was very hostile to Buddhism. He was an ardent Śaivite who expelled the Buddhists from the valley. Gandhāra passed under foreign rule for some centuries after the decline of the Mauryan Empire. It was held by the Greaco-Bactrian Kings, and then seized by Susor Abars in 126 BCE. The Graeco-Bactrian kings were defeated by Kuśans in the first centuries of the Christian Era.

1.2.4 The Greeks, Scythians and Parthians in Gandhāra: **The history of the Indo-Greek, Indo-Scythians and Indo-Parthian in Gandhāra is largely developed on numismatic evidence. The names of forty Indo-Greek kings and their successors were discovered from coins, while only seven from other sources. According to Strabo, Menander and Demetrius, son of Euthydemus, played an important role in conquering India. Menander-I, esteemd high in the Buddhist literature, made Sagala (modern Sialkot) as his capital and advanced as far as River Jamna. His biography elaborated in the Milindapañha refers him to be an ascetic in his later life. Plutarch mentioned that his body ashes were divided and monuments erected over them similar to as in the case of the Buddha (Bopearachichi & Aman-ur-Rehman 1995: 34; Mookerjee 1995). There is no proof that he was converted to Buddhism, however, he may have been a benefactor of the religion. Demetrius annexed to his kingdom three Seleucid Provinces, i.e., Asia, Arachosia and Siestan. Siestan was the focus of important trade routes: one lead eastward through Kandahar to the Lower Indus Valley and the other northeastwards through Ghazni and Kabul to Paropamisadae, where it joined the main Bactria-Kapiśa-Taxila route (Tarn 1938:93).**

The numismatic evidence suggests Archebias the last Greek king who ruled at Taxila before Maues, the first known Scythian king of Gandhāra who made Taxila his capital. A copper plate inscription found at Taxila in 1862 CE dates King Moga (Maues) to 155 BCE, who was overthrown by a Greek king Apollodotus-II (Falk 2009: 70).

The Parthian king Gondopharnes put an end to the Scythian rule and established his kingdom over Gandhāra and the neighbouring regions towards the end of the reign of Azes-II. An inscription of Gondopharnes reported from Takht-i-Bahi is dated to 20 CE. The Christian sources mention that St. Thomas the Apostle was sent to Gondopharnes.

According to Periplus (60-65 CE), while the successors of Gondopharnes were fighting to oust each other they were subjugated by the Kuśans. This brought the Indo-Scythian and Indo-Parthian rule to an end in 65 CE. The numismatic evidence suggests small city states that were ruled, sometimes, for less than half a decade (Bopearachchi & Aman-ur-Rehman 1995: 49).

1.2.5 The Kuśans in Gandhāra: **The Kuśans belonged to the Yue Chi tribe of Central Asia whose early history has been traced from the Chinese chronicles. The *Sanskrit* sources refer them as *Tushāras* i.e., 'men of the snowy lands'. *Ssu-ma-chiea,* the Chinese Father of History (145 BCE), mentions in his *Ssse-ki* (the Historical Record) that the Yue-Chi tribe was dweling in the Chinese Turkestan in 165 BCE. A war between the Yue-Chi and Hiung nu tribes lead the former pushed out from their territory. The Yue-Chi invaded Bactria in 130 BCE. Yue-Chi divided themselves in five principalities. The numismatic evidence suggests that Miaus (Heraus) who allied with the last Greek Prince of Kabul belonged to the Kuśan section of the Yue-Chi. He was probably an ancestor of Kujula-kadphises (Chattopadhayaya 1979: xvi).**

Kujula-kadphises the Head of the Kuśan section of the Yeu-Chi horde, established an authority over the five principalities. The Kuśan principality was the starting point of a Great Kuśan Empire, into which the Tahia territory was divided (Chattopadhyaya 1979: 5). Kujula-kadphises attacked the Parthians during the final settlement of the Yue-Chi; took possession of Kipin and Kabul and became the Master of Indian borderlands extending to the Frontiers of Persia.

The first achievement of Kujula-kadphises was the political unification of Ta hia or Bactria under the domination of the Kuśans. The *erjhuna kappa* in the Takht-i-Bahi inscription (45CE) probably corresponds to the name Kujula-kadphises. The numismatic evidence suggests that the territories ruled by Gondopharnes and his associates were conquered by the Kuśans in the time of Kujula-kadphises. On all these coins Kujula-kadphises declares himself as *Kuśana Yuvagasa* in Kharoṣṭhī and *Khoshansu zaoou* in Greek, which means 'of the Yavuga of the Kuśans'. He was succeeded by his son Wima Kadphises (Zürcher 1968). Wima-kadphises was the first Kuśan ruler who extended his empire to Gandhāra and proclaimed himself *Māheśvera,* a convert to Śaivism (Chattopadhayaya 1977: 47).
Kaniśka succeeded Wima-kadphises. The Kalhana's *Rājatarangini* describes him as a *Turushka* or a Turk. The Manikyala inscription proclaims him as 'the aggrandizer of the Gushana race'. Al-Bīrūnī describes him a descendent of the Turki chief Barhatgin, and the founder of the Shahiya rule in Kabul (Sachau 1910). The Buddhist traditions

mention that he fought against the Parthians. The Chinese historians refer to a famous conflict between a Kuśan King and the Great Chinese General *Pan-chao* during the reign of the Emperor Hoti (89-105 CE), possibly referring to Kaniśka (Hānda 2002: 66).

The Kaniśka's reign is as important as that of Aśoke in the history and propagation of the Buddhism. The epigraphic and numismatic evidence suggest a vast kingdom, extending from Gandhāra to Sui Vihar in Sind, from Ohd to Benarus in India, Kaśmir and eastern Turkestan. Huan Tsang reported that Kaniśka ruled his empire from his capital at *Purushpura* or Peshawar. The distinct style of Gandhāran monasteries was first developed during the Kaniśka Era (Foucher 1915: 3).

Kaniśka patronized art, architecture, and literature. *Kayva* (i.e., poetry) is the achievement of this period. The *Mahāvastu, Lalitavastara, Avadnaśataka, Divyāvadāna, Avadānaśataka, Divyāvadāna,* and *Saddarma Pundarika Sūtra* all date to his time. The Greek Engineer Agesilaus and the Politician Māthara were among the celebrities of his court. Aryaśūra, the author of Jatakamala was his contemporary. The Aśvaghoṣa's *Sūtralamkāra, the Samyuktaratna-pitaka Sūtra,* and *Dharma Pitaka-nidāna Sūtra* present him as a fervent supporter of Buddhism (Prebish 1994: 47).

Kaniśka convened the Fourth Buddhist Council at Kundalvan or Kanzalvan in Kaśmir. Songyun places the venue of the council at the Monastery of *Tamasavana* at the confluence of Sutlej and Bias (Beal *n.d.*a: xx). The teachers Parshava, Aśvaghoṣa, Vasumitra, Vasubandhu, Dharmatrata, and Sanghabhadra were among the leading figures of the council. A majority of the participants belonged to Gandhāra (Hānda 2002: 64). Kaniśka supported the Sarvastivadan and Māhāsañghika Schools. Huan Tsang mentions that previous treatises like *Upadeśa śāstras, Vināya Vibhaśa śāstras,* and *Abhidharma Vibhaśa śāstras* were thoroughly examined and re-written in clear language wherever needed. Three works were included during the council. *Abhidharma Pitaka* was an enormous work compiled. A commentary called Mahavibhasa was also prepared (Prebish 1994: 63). This work became the standard reference work for all later Sarvastivadan *Abhidharma*issues. The Sarvastivadan School possessed a complete Canon, much of which is preserved today in Chinese and Tibetan translations, as well as in Prakrit and *Sanskrit* fragments. At the end of the council the missionaries were launched from Kaśmir to Afghanistan, Central Asia and China (Stein **1989: 355).**

Trade thrived between Gandhāra and the Roman Empire through Silk Road during reign of Kaniśka. He established contacts with China, Persia and Rome, and adopted four titles, *Devaputra* (Son of Heavens), *Shaonana Shao* (King of Kings), *Caeser*

(Kaisara) and *Maharaja*. An international relation reached its zenith in his time and, consequently, a rich trade and commerce flourished between the Eastern and Western, connecting Rome with China (Dani & Bernard1999: 69; Elverskog 2010: 26). The Palmyrene inscriptions mention caravans from Palmyra to Charax in Characene, but some refer to direct relations between Palmyra and the Kuśans, who controlled regions around the mouth of the Indus (Binar 1989: 140; Ingholt 1957: 17). The *Periplus Maris Erythraei* provided interesting materials on the commercial intercourse between India and Rome during Kaniśka's Period The economic prosperity lead Kaniśka to issue gold coinage. No Indo-Greek, Bactrian or Śaka ruler issued gold coinage, except a single discovery of a gold coin from Taxila (Tarn 1938: 104).

Some later trade links of Gandhāra with the Europe may be gleaned through a small bronze Buddha statue (5th-6th *c.* CE), executed in typical Gandhāra style, excavated in the mid fifties, in Helgo Island, in the Capital of Sweden, and now housed in the Swedish Natural History Museum in Stockholm. Helgo was an important trading post from 5th to 8th *c.* CE (Johnston 2009: 3).

A number of coins issued by the Indo-Greeks, Indo-Scythians, Indo-Parthians, and Kuśans were found from Śri Lanka. The Hellenistic and Greek influenced pottery is also found from the citadel of Anuradhapura, attesting the relations with Gandhāra. The trade links continued for several centuries later on, as attested by the Gandhāra Buddha statues in schist, unearthed from Jetavanarama Monastery, dated to 3rd-4th*c.* CE, is the largest of its type in Asia. Fa Hien recorded the shift of trade routes toward Kaśmir in early 5th *c.* CE (Bopearachchi 1997/8: 279).

Kaniśka ruled for about twenty three years. His immediate successor Vāśiska had a short reign. The empire of Huviśka, the successor of Vāśiska, was no less extensive than that of Kaniśka. His dominions included Kabul, Kaśmir and Mathurā and he followed the religious policies of Kaniśka. The Buddha disappeared from coins. The gold coins of Vasudeva-I bear Śiva and rarely an Iranian deity. Huviśka was an adherent to Māhayāna ideals (Walser 2005: 31). He lost hold over Gandhāra, which was then invaded by the Sassanids of Persia. Huviśka, Vajhaśka and Kaniśka-II were reputed founders of the three cities in Kaśmir named after them.

1.2.6 The Kidara Kuśans: **Kidara Kuśans, probably a branch of the Great Hūn tribe, came to Gandhāra and its adjacent provinces in the leadership of King *Ki-to-loc*. 340-80 CE, it was then occupied by the successors of Kaniśka (Biswas 1973: 45).**

The Chinese sources refer to Kidara Kuśans who were ruling in the Kabul Valley and parts of the Indian borderland in the middle of the 4th *c.* CE under suzerainty of the Sassanids. The numismatic evidence suggests the names of some chiefs belonging to *Shāka, Shilāda* and *Gadahara* tribes. The *Gadaharas* are associated with the Kidara Kuśans on numismatic basis. Their coins resembled closely to those of Kaniśka II and Vāsudeva II. In Shahpur's II (309-379 CE) besiege of the Roman fortress of Amida, the Kidar Kuśans fought under the banner of the Sassanids. The evidence of the Armenian historian Faustous proves that the Kidar Kuśans were engaged for sometime in a war with the Sassanids, most probably in order to establish their own territories. However, Guptas over reigned them. The Allahabad Pillar inscription describes that the Kuśan monarchs[1] or monarchs of Northwest sent valuable presents to the Gupta monarchs. Samudra Gupta, whose aim was the unification of India (*dharanī-bandha*) completely, diminished the glory of the Kuśan Monarchs (Chattopadhayaya 1979: xxiii).

Benenitsky (1968) had already suggested three main factors responsible for the decline of the Kuśan Empire, i.e., (1) the Sassanian expansion, (2) the formation of Gupta kingdom, and (3) the Hūn's invasion. The gradual annexation of the Northwest Provinces took place during the reign of Sassanid Monarchs Ardasher I (226-41 CE) and Shahpur I (241-272 CE). The Indo-Roman trade that flourished in the first three centuries of the Christian Era gradually declined at the end of the 3rd *c.* CE. The rise of independent Republic in the eastern Punjab under the Yaudheyas and the Kunindas at the beginning of the 3rd *c.* CE caused further decline to the once flourishing Kuśan kingdom.

1.2.7 The White Hūns: **The Hūns were a nomadic tribe on the northern border of China. The earliest Chinese records call them *'Ti'*, later *Pei-Ti*, meaning the northern *Ti*. The author of the Purānas, the *Mahābhārata* and Aitāreya Brāhmana knew about a trans-Himalayan people to whom they gave a legendary status, *Uttarakuru*. Most probably these *Uttarakuru* people were the *Hsein-Yün* of Chinese histories and the *Hūni* of the Geographer Orosius (Biswas 1973: 37).**

The text *Pei-Shih* corroborates the vast empire of the Ephthalites or White Hūns, including Persia, Central Asia and Gandhāra. In the Khubad reign, the White Hūns crushed Sassanians, and then marched towards India. When they reached Gandhāra, it was ruled by the Kidara Kuśans. The numismatic evidence suggests that Thujina[2], was

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[1] ***Daivaputra Shāhi-Shāhānu-Shāhi***

[2] ***Tunjina or Tigin***

the first Ye-tha chief or Tigin [1] who established Ephthalites permanently in Gandhāra and probably extended his empire up to Kaśmir. He was succeeded by his son Turamāna. Turamāna further extended the Hūn's Empire. The Hūn's coins were found from Peshawar to Kaśmir. Turamāna's occupation of Kaśmir is also attested by the Kulhana's Rajatarangini. An inscription of Turamāna was recovered from Kura in the Salt Range (Biswas 1973: 57). He probably died somewhere in the first two decades of 6th *c.* CE, and was succeeded by the historic Mihirakula (515-530 CE). Mihirakula further extended his empire to Sindh and Peshawar.

Mihirakula is depicted as a man of cruel disposition in the Buddhist legends and the Chinese pilgrims' chronicles. Later on, the Colonial archaeologists largely considered the White Hūns responsible for the destruction of the Gandhara monasteries. However, Biswas (1973: 108) is of the opinion that the Buddhist legendary accounts possibly exaggerated the cruelties, as both Kalhana and Kosmes are silent about the anti-Buddhist activities of Mihirakula. Huan Tsang even mentioned that during his early career Mihirakula was in a habit of studying the Law of Buddha. Mihirakula was a great patron of Śaivism in the final years of his political career. Kulhana mentions that he bestowed a thousand *Agraharas* on the Brāhmans of Gandhāra.

Traditionally, the final extinction of Gandhara monasteries is ascribed to the White Hūns (Nakamura 1989: 147). However, a detailed analysis of the Hūn's rule reveals that they did not destroy the Gandhara monasteries as a policy matter (Biswas 1973: 108). The monasteries suffered the war havocs and monks took refuge to safe abodes. Nonetheless, historical records also mention that the monks returned to their former monasteries and revived their intellectual and religious functioning, as soon as peace was restored. There were some monasteries that altogether escaped the war ravages of the Hūns. Songyun, who visited Swat, five years after the Mihirakula's persecution, reported monasteries flourishing. monasteries in Swat were finally ruined due to cut off trade and loss of economic support[2].

The civilization of Later Hūns has been recorded from a short inscription of the King Khingala, found from Kabul. It originally belonged to Gardez, some 70 miles to the south of Kabul. It shows an image of Vināyaka (Ganesh). The short inscription of two lines on the pedestal of the image in north Indian alphabets, has been dated from the mid of 7th *c.* CE on Paleographic grounds. The last words of the second line read as

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[1] *Tigin* was the Turkish title used for the Governors of the Provinces

[2] A scientific analysis is given in chapter 5 of the thesis.

'Mharājadhiraja Śrī śāhi khingala Odyā (tyā) na śāhipādiah'. Tucci comments that the word _otyāna_ may refer to _Odyāna_, a king of Uḍḍiyāna, i.e., the Swat Valley (Biswas 1973: 131).

The successors of Mihirakula reigned in Kaśmir. The _Purānas_ confirm that eleven Hūns reigned for about three hundred years. They were possibly not independent kings, but chiefs over small territories in Gandhāra. The Hūns who remained in India after their unsuccessful effort to gain political supremacy became Hindus, and were included in the Kṣatriya caste. They adopted Śaivism and they gave their daughters in marriage to Brāhmans and Kṣatriyas. They took Indian names, and gradually were merged in Hindu population. The Kṣatriyas or Rājputs were possibly the descendents of the foreign invaders who entered Northwestern India from time to time (Hilbeitel 1999: 439-440). The Gurjaras originally called as Khazars, were also a subordinate tribe of the Hūns, who entered from Northwestern Provinces in the beginning of the 6th _c._ CE and finally settled in Gujarat in the later centuries.

To sum up the chapter, the researcher has attempted to provide an overview of the legendary, historic, geographical, religious, and intellectual development of Gandhāra since the first arrival of Aryans along the Indus basin. The chapter outlined a short political history of Gandhāra from Vedic Period to the Hūn's invasion in 5th _c._ CE. It also provided some information on the Silk Route network connecting the Imperial China with the Imperial Rome not only transferring the luxurious commodities but also the religious culture from Gandhāra to China at one hand, and from Gandhāra to Rome to the other end, affecting the central Asian countries during its journey. The trade links had transformed the cultural and religious history of the whole Asia (Hānda 2002: 67).

CHAPTER 2

PRE-BUDDHIST EDUCATION SYSTEM OF THE UNIVERSITY CENTRE OF TAXILA

This chapter[1] introduces the contributions of the Pre-Buddhist teachers of 'the University Centre of Taxila[2]. There is no indication to suggest us that there was a formal university as in the modern terms. Rather the famous teachers taught their specialization at their houses. Some students studied with more than one teacher. For instance, Uddalika Aruni studied under more than one teacher, including two medical practitioners. The students receiving early education elsewherewere were acceptedat the age of sixteen.

The Uddalika Aruni and his family, the first authors of the *Upaniśads*, largely remained neglected figures in history. They elaborated on the courses extracted from the treatises of Páńini and Kautilya. They maintain that political treatises of Kautilya, practically implied by the Mauryans were mimicked from the political administration of Gandhāra, initiated by Achaemenids in the 3rd *c.* CE. Benarus in India, another University Center, was started by the graduates of Taxila. Here till the 17th *c.* CE the conventional system of education as was in vogue in Taxila continued (Gen'ichi 2005: 23; Marshall 1975: Appendix B). Here, we are confind to elaborate on the intellectual legacy of Taxila to Gandhāra that has not been the focus of scholars so far.

2.1The intellectual legacy of Gandhāra: **The archaic language of *Ṛgveda*is closely related to the ancient Persian language, and was probably brought by the Indo-Aryans with their earliest migrations to the Indus Basin. *Ṛgveda.10* and some parts of *Brāhmanās, Aranyakas* and *Upaniśads* are preserved in the arcaic language[3]. The priestly class faithfully transmitted the archaic style which can be observed in the *Vedic* treatises. The *Sanikrit* of Pānini is a modifiedform of the archaic style. Almost all languages of the Indian Sub-subcontinent owe their vocabulary to *Sanikrit.* Sinhalese in Śri Lanka (Ceylon) is a direct descendent of Páńini's *Sanikrit* (Winternitz 1977:41).**

The *Ṛgveda*, which mentions the names of tribes and rivers from the Caspian Sea to the Punjab, seems to be the work of poets of northern India (Lal 1998; Prakash 1976:44,

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[1] **Aleady published as, Taxila: A Type Site of the Rich Cultural and Educational Heritage of Pakistan. *Journal of Asian Civilizations,* 35 (2), 39-53**

[2] **The term 'the Univrersity Centre of Taxila' was used after Dar 1998.**

[3] **These parts repeatedly mention the Indus Basin.**

45). The Kekya, Madra and Uśinara were the *Ṛgveda* tribes. The Kekyas, living between the Jehlum and Chenab, were famous for their love and pursuit of knowledge. The Philosopher King Aśvapāti of this tribe taught numerous Brāhman scholars (*Śatapatha Brāhmana*.X.6.I.2.; *Chhāndogya Upaniśad*.V.II.4.). *Sākala or Śākala* (modern Sialkot) was capital of the Madra clan who produced eminent teachers like Madragāra Śaungāyani and Patancala Kāpya, the preceptor of Uddalika Aruni (*Brhadāranyaka Upanishad* III.7.1). In the *Vinaya* of the Mūlāsarvastivadan Śākala is known as Bhadrankara. The famous Jivaka, physician of the Buddha, travelled from Taxila to Bhadrankara.

***Mahābhārata* was either written down or its redaction took place at Taxila, where Vaiśampayana recited it to Janamejaya (Dar 1998: 9). The language of the two National Epics, *Mahābhārata* and Ramayana, is little different from Páńini's *Sanikrit.* All these forms of *Sanskrit* are modifications of the north Indian dialect (Winternitz 1977: 42). Arnold J. Toynbee (1948) maintains that *Mahābhārata* owes its genesis to the Śākas, who invaded the northwestern Provinces in 9th *c.* BCE (Prakash 1976: 134).The redaction of *Mahābhārata* at Taxila in 6th *c.* BCE might have added the Achaemenian incursions in Gandhāra. Later on, its heroic narrations were revised during early centuries of the Christian Era according to the contemporary Brāhmanical interests till its final adjustments in the Gupta Period. Gandhāra became a centre of culture and education in the period of Brāhmanas and Upaniśads. King Pukkusāti gained much power in 6th *c.* BCE and his rule including the territories of Kaśmir and Northwestern India was spread to the Ravi in the east and Multan in the south. Taxila grew as the highest seat of learning, culture and commerce at this period.**

2.2 The University Centre of Taxila: The Seat of a Scientific Education System

2.2.1 The city of Taxila: **The name of Taxila has been mentioned *Mahābhārata* and Rāmāyana (Salamon 2005; Dar 1998). The Páńini's *Ashtadhyayi* describes Taxila as an ancient seat of learning and a well known center of trade. According to Rāmāyana, Pushkalavati and Takshasila were founded by the Bharatas. *Mahābhārata* mentions that the Pandus came to Taxila under the leadership of Parikshat and ruled here. He appointed two of his sons, Taksha and Pushkala, as rulers of the two cities. His son Janamejaya subjugated Naga tribes and performed here the great *Ashvamedha,* i.e., the horse sacrifice.**

The intellectual legacy of Taxila was further enriched with the Hellenic influence after Alexander's invasion. Several philosophers and scientists accompanying the Alexander's

troops settled here and other parts of ancient Gandhāra. The Gandhāra and Greek contacts took place in several fields, such as medicines, physical sciences, arts, literature, astronomy, philosophy, etc. (Dar 1998: 28; Marshall 1975: 43).

At Taxila students, princes and Brāhmans resided to study three *Vedas* and nineteen *śilpas*. The *Jātaka* and the Greek accounts refer that it attracted students from faraway places. The Greeks described Taxila as *mikri Hellada*, i.e., mini Greece (Dar 1998: 28). Some Roman citizens also studied here science and philosophy during the reign of Constantine (Vassialiades 2000: 77).

Alexander was impressed by the knowledge of the ascetic philosophers at Taxila (Sen1998: 127). His representative Iarchas claimed that they taught the knowledge of soul to the Egyptians (Vassiliades 2000: 45). Al-Bīrūnī mentioned that Alexander sent some Brāhmans to meet and have debate on philosophical matters with Artistotle (Chaturvedi 1985: 76).

Magesthenes divided the philosophers (*sarmanea*) into several categories mainly 'Hylobioi', 'Physicians', and 'Semnoi'. He reported that the philosophers and ascetics were few in number but highest in rank in the society (Dahlaquist 1996). The *hylobioi* were held in great honor by the king; the physicians lived a simple life, studied the nature of man, and practiced medicines; and the *semnoi* were the astrologists, who made predictions (Dar 1998: 184; Vassiliades 2000: 51).

2.2.2The University Centre of Taxila: **Students came to Taxila to complete their education in three Vedas and the eighteen Śilpa or crafts. The courses in humanities and sciences included law, medicines and military education; elephant lore, hunting, animal cries, archery; music, singing, drama and magic. Babhravya in Kama Sūtra mentions sixty-four Pancala Kalas or arts at the University Center of Taxila. The students did physical work as a daily routine (Varana *Jātaka*.I.71, Parantapa *Jātaka* VII.416: Cowell 2002: 172, 249), the teaching was also carried out through riddles and parables (Kumbhakara *Jātaka* VII.408, Cowell 2002: 228; Jagara *Jātaka* VII.414, ibid: 243) and the teachers also taught at night their students (Junha *Jātaka* XII.456, Cowell 2002: 61; see Table no. 1).. The Brāhmans used to go to north for study (*Kausitaki Brāhmana*.VII.6).**

Teachers were known as *disāpāmokkho ācharya*, (*pancamānavakasatāni*). The teacher's fee, *ācariyabhāga*, was paid in advance by rich students. Conversely, the poor students paid the fees either by serving the teacher or collected fees generally through alms. Sometimes princes financially supported their poor companions to receive education.

The ability and achievements of the students were revered, rather than their cast. Jivaka Kumarabhuta was given high status in the Buddhist literature due to his extra-ordinary medical skills and not his cast (Dar 1998: 10; Gen'ichi 2005: 23-25; Rhys 1999: 2).

Teachers from Taxila highly esteemed the scholarship prevailed in Gandhāra and its geographical sanctity. Uddalika Aruni in refers to Gandhāra and its teachers and compared a person blind-folded who had not gone to Gandhāra (Chhandogya UpaniśadVI.4). *KA*.III.18 prescribed a fine for a person who slandered or vilified Gandhāra (Prakash 1976: 82-83; Sen 1998: 54).

2.3 Teachers of the University Centre of Taxila

The Univrsity Center of Taxila produced some of the great teachers and scholars in ancient India, including Brahmadatta, Páńini, and Ghoṣa (a great physician and a contemporary of Aśoke and a specialist of eye surgery). The earliest *Upanišads* were originated at Taxila, in *Mahajanapada* Gandhāra and central Gangetic Basin (Samuel 2008: 100). The religious, social and economic life of Gandhāra saw a dramatic change in the form of Upaniśad movement by the 8th*c.* BCE. It gradually moved to the eastern India by the 6th *c.* BCE, affecting the life in the Ganges Valley (Hamilton 2000: 36; Winternitz, Winternitz & Subhadra 2003: 241). The teachings of the *Upanišads* reached the Pre-Islamic Persian mysticism, the mystic theo-sophic doctrines of the Neo-Platonists and the Alexandrian Christians. The Islamic Sufism also borrowed some traits from Pre-Islamic asceticism[1] (Chaturvedi 1985: 77).

2.3.1 The Upanišad Movement of Uddalika Aruni and Svetaketu Auddalaki: **Although the *Upanišad* movement gained worldwide attention of scholars, yet its propagators remained neglected in history. Aruni and his family were pioneering figures of practical and scientific education and social reforms as early as 8th *c.* BCE (Chattopadhyaya 1977:305).**

Aruna Aupavesi, his son Uddalika Aruni, and grandson Svetaketu Auddalaki were the renowned teachers of the *Upanišads*. Aruna Aupavesi advised to observe silence in order to follow the path of truth. The oldest traditions maintain Aruni, son of Aruna Aupavesi, a noted student at Taxila. (*Śatapatha Brāhmana* VI. 4.1 .1). He came from Pancala country in the Punjab, studied at Taxila and later taught there. He received education at

[1] The Upanišads were translated into Persian by Dara Shikoh, and perhaps even earlier by the Sanskrit Pandits employed with court of the Emperor Akbar. In 1775 it was translated into French and Latin by Anquetil Duperron.

Madra from Teacher Pancala Kāpya, an authority on medicine, and from Śaunaka, a specialist of physiology and anatomy. Svetaketu Auddalaki, his son, became a *rshi*. The authorship of the *Chhandog Upaniśad*, the Satapatha Brāhmana, and the oldest portions of the *Brhadaranyako Upaniśad* is ascribed to Uddalika Aruni and Svetaketu (Chakladar 1987: 13-14; Chattopadhyaya 1977: 302; Easwaren and Micheal 2007: 121; Garg 1992; Mookerji 2003: 332).

In *Chhandog Upaniśad* and *Brhadaranyako Upaniśad*, Uddalika Aruni is referred to as the foremost teacher of'Family Laws', which were developed as backdrop of widely spread erotics all over Kuru Panchala country, especially the Punjab. *Kama Sūtra*, the science of erotics had gained popularity among the masses. Consequently, the religious conventions underwent changes and an errotic social structure emerged (Prakash 1976: 235). The institution of marriage was largely neglected. Svetaketu established fixity in marriage relationships and wrote down five hundred works on the topics which are fragmentarily preserved in the *Brhadaranyako Upaniśad* (Chakladar 1987:14). Although later South Indian chronicles declared Uddalika Aruni as author of *Kama Sūtra*, actually his *Upaniśad* movement was a strong reaction against the evil social practices. The *Upaniśad* also advocated for providing equal opportunities of education or religious practices not only to upper classes but, also,to women and people of low birth (Singh, U. 2008: 24).

2.3.2 Bhagavat Gītā: an Upaniśad of Bhagavats: **The earliest parts of the *Bhagavat Gītā* were possibly written as an *Upaniśad* of the Bhagavats since 2nd *c.* BCE (Winternitz 1977:438; Merriam Webster's Encyclopedia 1995:126). Bhagavats, a Vaiśnava Sect who recited Gītā, had founded adherents among the Greeks in Gandhāra (Śāstri 1987: 33; Vankateswara 2007: 49).**

2.3.3 The Contribution of Páńini: **Páńini, a Brāhman scholar, was born in Lahor, a village in the northwest of *Ohind* (modern Hund), a thriving town on the Indus with a large mercantile community. Huan Tsang writes that the *Sanskrit* grammar used in India was the work of a native of *Tula* or *Śalátura* (modern village Lahore) named *Po-ni-ni* or Páńini, the author of *Vyakaranam* He took back to China Páńini's Hetuvidya Śāstra and Śabduvidya Śāstra. Páńini's *Ashtadhyaya* is one of the earliest known grammar of *Sanskrit* (Agarwal 1953). The original treatise is lost, however its fragments survive in later works. The linguistics was highly developed in Gandhāra before the Páńini's time, as he refers to the existing grammar books, e.g., *UnadiSūtra, Dhatupatha,* and *Ganapatha*. *PA* marked the end of a classic and star tof a new era of *Sanskrit*. The oldest *Brāhmanas* and *Sūtras* were written in Páńini's *Sanskrit*. He created a fixed standard**

that remained a criterion for the *Sanskrit* language for several centuries. For about one thousand years the great mass of poetic and scientific literature was produced in this language (Beals 2004:114; Keith *n.d.*: 112; Wilson 1862: 325-327; Yung-hsi 2005:39).

The eminent grammarians and the linguists speak high of the Páńini's *Sanskrit.* They praise his treatises for their excellent grammar, detailed analysis and sophisticated scientific treatment. William Jones pointed out that *Sanskrit* was even more refined than Greek and Latin. Leonard Bloomfield, one of the masters of modern linguistics, remarked that Páńini's grammar was one of the greatest achievements of human intelligence. According to MB Emeneau, an American *Sanskrit* expert, the Páńini's linguistic followed the scientific canons (Muraleemadhavan 2002: 15; Robins 1997; Vassiliades 2000:14; Winternitz 1977:3).

2.3.4 The Contribution of Kautilya: **The Pali chronicles claim Kautilya a resident of Taxila, others think that he was a native of the country surrounding the River Kutilā or Sarasvati (Shendge 1977:299). The Brāhmanical, Buddhist and Jain traditions agree that Kautilya was instrumental in installing Chandragupta on throne, who was brought to Taxila and educated there. His knowledge of various arts and sciences was encyclopedic and was regarded as an authority on material science. *Kāmandakīya Nītisāra* of Gupta period is mere a summary of the work of Kautilya. The *Nītivākyāmrita* of the Jain writer Somadeva Sūri (960 CE) is also a summary of the earlier political thoughts of Kautilya. Bana and Dandin refer to Kautilya with reverence (Rangarajan 1992:17).**

The Kautilya *Arthaśāstra*, meaning the science of wealth or economy, covers subjects of administration, law and order, justice, taxation, revenue and expenditure, foreign policy, defense and war, and ethics (*Dharma Śāstra*).

2.4 The Pre-Buddhist Education System

***Aśrams*[1]were the hermitages of ascetics or forest academies that attracted students from far off places. Here stdents, selected on the basis of truthfulness and honesty, were imparted instruction called as *Upaniśad*[2]. Aruni Aśram was a famous educational center in Kuru Pancal region of the ancient Punjab. It produced famous scholars like Yagna Valkaya. The oldest *Upaniśads* ascribed to Uddalika and his son Suivita Keoto provides a peep into the school life. Students from all over the places flocked around a renowned teacher. The oldest *Upaniśads* do not restrict early *Aśram* life to ascetism and self**

[1]Sanskrit Root word *shram*, meaning 'to exert'

[2]Literally meaning 'to sit together' (Datta 2001: 239)

mortification. Uddalika Aruni and Svetaketu lived a married life and according to Dharma Sūtra that the latter used to live in an *Aśram* for two months in a year (Chakladar 1987:16). *Aśrams* played an important role in the development of the Indian education and culture till its disintegrated by the British education system introduced in 20th *c.* CE (Datta, A 2001:239-240; Jha, India and Nepal *n.d.*:105; Kaelber 2007: 72; Reagon 2005:172; Winternitz, Winternitz & Subhadra 2003:228).

The didactic and pedagogical components of the Upaniśads are compatible to the classic and modern concepts of 'reflective practices and enquiry' in education. Aristotle mentions *theoria dimension* (reflection) on what is done, which leads to further action. The critical theorists of early 20th *c.* define 'reflection' as the genesis of one's present consciousness, done by critical reason. According to Frankfurt School (1940s) "the intellectual attainment of the mind is gained by reflection". John Dewey also mentioned that problems are solved only through reflective practices in education. However, the earliest mention of *shravana* (listening to one's teacher) refers to *menana* (the content) and *nididhyasana* (reflection on what was listened) in the Upaniśads. The *Chhandog Upaniśad* describes *rita,* i.e., law, order or regularity as the basis of all scientific and moral rectitude (Astley & Leslie 1994:221; Easwaren and Micheal 2007:121; Reagon 2005:172).

The researcher has analyzed the didactic component of the 'Oneness Philosophy of the *Chhandog Upaniśad'* that forms a part of the *Chhandog Upaniśad,* due to its highly didactic component, and research methodology (see Appendix 1).

The *Páńini's Astadhyāyi* mentions teacher as *adhyapaka* and student as *chhatra*. It also refers to science concepts like *padartha* or matter, *sattva* or metallic essence, *paramana* or measuring standards, *upajna* or discovery of new knowledge and its application or *upakrama*.Girls' schools were called as *charanas* and female hostels as *chhālri sala* (Chattopadhyaya 2007:275; Sen 1998:58). Páńini described the grammar in terms of a finite number of rules. He described the process of sound production within the vocal chord and other organs. This corresponds with the modern phonetic theories according to which the vibrations or ripples of the breath create the phonetic sounds audible (Nagrajji 2003:38).

2.4.1 The courses of study: **Kautilya commented that early education started at the age of five and ended at eight, wherein the child was taught reading, writing and mathematics (Singh 2000:834). At the second initiation (*upanayana*), the child was taught the triple Vedas, the science of logic, economics and politics. The qualities of intellect, desire to**

learn (motivation), listening, grasp, retaining, rejecting false views (critical analysis) and adhering to the true ones were the important component of learning (Rangarajan 1992:119).

Kautilya prescribed four divisions of study, i.e., *Anvikshaki, Trayi, Vārta*, and *Dandaniti*for every one and an additional course for princes.

1. *Anvikshaki* included philosophy subjects: *Nyāya, Vaiśesika*, and *yoge*.
2. *Trayi* included the first three Vedas and related subjects like *Atharvaveda*, history, and *Vedangas*. *Vedangas* included phonetics, ceremonial practice, grammar, etymology, metres, and astronomy.
3. *Vārta* included agriculture, cattle rearing and trade.
4. *Dandaniti* was the penal code.
5. A prince had to study *Purānās*, lore, *Dharmaśāstra*, *Arthaśāstra*, as well as the art of fighting on elephant, horse,chariot, etc., in addition to the four divisions of courses described above.

2.4.2 Political education: **Kautilya provides clue to the existence of well established schools of politics in Gandhāra well before his time. Fragmentary passages in *Ṛgveda* and *Atharvaveda* throw light on theory and practice of government. The *Rājadharma* section of the Śāntiparvan of *Mahābhārata* and Kautilya Arthaśāstra acknowledge the works and theories of pioneering writers such as *Brahmadeva, Śiva-viśā-laksha, Indra, Brihaspati* and *Śukra, Manu Bhāradvāja* and *Gauraśiras*. Kautilya acknowledges that his work was based on treatises of the past. He refers to five schools of thought on political education, i.e., *Brihaspati, Ushanas, Prachetasa, Manu, and Parasara*. Teachers, likeVishalaksha and Bharadwaja are also quoted (Rangarajan 1992:16). Some schools claimed that Manu was the founder of the political science. Owing to strong political education several powerful city states were established along the banks of the Indus long before Kautilya (Altekar 2002:40).**

Kautilya was deeply influenced by the laws, customs, traditions and practices of Gandhāra, which followed the state policies of the Achaemenids (Prakash 1976:184). The centralized administrative system of the Achaemenids, establishment of satrapies, census of citizens and collection of vital statistics, became a prototype of *The Kautilya's Arthaśāstra*.

2.4.3 Hydrology: ***Ṛgveda*****.1, 27.32.8 mentions that the evaporation of water is converted to clouds, which fall back on the earth as rain and takes the shape of rivers, ponds and oceans. The cloud bearing winds, intake of water by plants and capillary action of the soilis well explained (*Ṛgveda*.V.54, and N.55.5, and *Mahābhārata.*184.15-17). The knowledge of monsoon winds and height of clouds, *varshaman*, i.e., raingauging, and an organized water pricing system was well established at Kautilya's time (Jain, Pushpandra and Vijey Singh 2007:59).**

2.4.4 The environmental education: **The prosperity of state depended upon its natural resources and it was the king's responsibility to protect the earth, which comprised mountains, valleys, plains, deserts, forests, lakes and rivers. *The Kautilya's Arthaśāstra* provides lists of flora and fauna of a particular area and superintendents of forests possessed good management skills, as well as ablity to identify and classify plants and trees according to their uses. Possibly, taking *Kautilya's Arthaśāstra* as a guiding text, the Mauryans made the protection of flora and fauna as moral responsibility of the state as well as the individual. Fines were levied on cutting, injuring or falling plants and trees; especially those of holy places, city parks, or cremation grounds (Mc Gree 2000:67).**

2.4.5 The moral education: **The human societies form myth to explain morality (Britannica Macropedia 1994:492) Story telling is one of the most primitive characteristics of the human race. Folklore had an important educational role in the ancient societies. Its function is moral, ethical, linguistic and numeral, as well as maintaining control over the common masses. It was also used to teach history to the common people. It was used as a strong medium for expressing social approval and disapproval. At the same time, it served to entertain, relax, and temporarily escape from the daily life apprehensions. People sought delight in telling a story. It pulled them apart from the drudgery of the routine life. Finally, its popularity decreased due to invention of modern print media.**

***Mahābhārata* relates that legends and tales were included in the education of princes. The earliest fables are found in *Chhandog Upaniśad*, *Mahābhārata*, Pañchatantra and Hitopadeśa. The oldest beast fables occur in *Chhandog Upaniśad* in which animals are introduced as actors and speakers. The *Sīgālovada Suttanta* reveals that story telling in mixed prose and verse (*akkhāna*) took place at *samajjas*, the regular institutions for scenery, music and dancing. Such meetings were held at sacred places on the hill top to whichhigh officials were invited (Chaturvedi 1985:91; Mookerji 2003:338; Rhys *n.d*).**

The *Pañcatantra,* original lost, has four versions. The first version with Pahlavi translation was rendered in 5th *c.* CE; the second carried out in North India was interpolated in the version of *Gunādhya's Brhatkatha,* which formed the basis for the *Brhatkathamanjari* of Ksemendra and the *Kathasaritsagara* of Somadeva in 11th *c.* CE. The third version is represented by two Kaśmirian versions, while the 4thone is the southern Pañcatantra (Keith*, n.d.*: 246).The Kaśmiri *Tantrākhyāyikā* ascribed to Visnuśarma[1] is regarded as the earliest and nearest to the original version (Vassiliades 2000:157). The impact of *Pañcatantra* on Asian and European literature remained for several centuries[2]. These fables teach truth and adherence to the pledged words. Many children fables and folklore in old Sindhi language are based on Pañchatantra stories (Datta 2005:1711; Stein 1995:10).

***Dharma Śāstra, Niti Śāstra* and *Sulbha Śāstra* of *Kautilya's Arthaśāstra* describe moral and ethical principles, which require discipline. Knowledge should lead to intellectual and moral perfection. The precepts of elders should be obeyed, faith and obedience should be shown to the teachers; the six senses and the passions should be controlled. *Dharma Śāstra* was revised at the Gupta Period (Singh 2000:1441).**

Kautilya, known as Chanākya Kāutilya or *Sānaq* to the Arabs in 7th *c.* CE was the author of *Chānakya-sūtra*. Ibn Nadim in his *Al-Fahrist* writes down Shanaq or Sanaq as author of the book of conduct of life, the management of war, and on medicines. Several other works on medicine are also attributed to him. Siraj-al-Malik (12th *c.* CE) in his work Tortūsī describes the wisdom and aphorisms of Sānaq, possibly taking his information from *Chānakya-nītisāra*. Chānakya's works have been translated in Greek by Demetrios Galanos[3] (1760-1833); Kaphales published the Greek and Italian translations of the same under the title, *Sommaria di snetenze morali del*

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[1]whose actual date is not known. The scholars have estimated a long time ranging between the 2nd *c.* BCE and 6th *c.* CE

[2]*Pañcatantra* was rendered into Pahlavi (Mid Persian) in the mid of the 6th *c.* CE at the instance of Khusran Anushirvan and from there it was translated into Arabic and Syrian. The *Pañcatantra* was extant as Ibn Almukaffa*'s Kalila wa Dimna*at Al-Beruni's time.Pañcatantra was translated from Syrian to Greek at the end of the 11th *c.* CE, and a little later a Hebrew translation occurred. In 15th-16th *c.* CE, a number of translations appeared in Latin, Italian, Spanish, Durch, French, English, Hungarian, Turkish. It was translated into English by Thomas North, as the Moral Philosophic of Doni in 1570 CE (London), and edited by A. W. Ryder in 1925 (Chicago) (Houtsma 1913-1938: 663; Vassiliades 2000: 157).

[3] The most important Greek scholar in modern times who translated a large number of *Sansk*rit works into modern Greek language.

filosofoindianoSanakea **in 1835. The text was repeatedly translated in several European languages, e.g., French, Italian and German (Levy 1973:16; Vassiliades 2000:155).**

We made an effort to outline a short sketch of the intellectual legacy of Gandhāra, with special reference to the University Centre of Taxila. It highlights the fact that Pre-Buddhist teachings at Taxila were based on scientific methodologies, sometimes comparable to the modern concepts of reflective practices, enquiry, critical analysis and inference in education, as well as the moral and ethical development of personality.

CHAPTER 3

THE ORIGIN AND DEVELOPMENT OF BUDDHIST EDUCATION SYSTEM

Gautama Buddha, the founder of Buddhism was a great teacher of his time. His teaching methodology, philosophy, and ethical/moral values are incumbent in the Buddhist education. This chapter highlights the role of Gandhāran teachers and philosophers and their impact on the later Buddhist monasteries in Asia. It provides an overview of the contributions made in the development of Hinayana and Māhayāna Buddhism.

3.1 Buddha as a Great Teacher

Gautama Buddha was among the great teachers of his time, i.e., Confucius (551-478 BCE), and Lao-Tsze (600 BCE) in China, and Zoroaster (589-539 BCE) in Persia. The scriptural legends describe him as *sammā-san sāthā* (teacher) (Gour 1929:10). Buddha was born in the powerful Śakya clan of Rajputs, who claimed their descent from the solar race of the Gautams founded by *Ikshvaku*. His father Siddhodhana[1], a Chieftain of Kapilavastu[2], had already acquired the reputation for fair dealing by his tenant. According to Gour (1929:78) the tribe Śākya probably migrated from Northwestern India to Kapilavastu, at a remote date. Prakash (1976:47) discusses the earliest known invasion of the Śākas in Gandhāra in 9th *c.* BCE. He suggests that the name of the clan Śākya clan was from the tribe Śāka. Páńini also derives the name Śākya from the word Śāka.

3.1.1 The Backdrop of the Buddha's Philosophy and Education: **The Colonial archaeologists variously mentioned the development of the Buddhist philosophy. Buddhism arose in tption and chaos. The priests had strictly controlled every sphere of the social and political life (Rhys 1999:72). Old *Vedas* were altered and new were fabricated. The *Atharvaved*a was consisted of incarnations, charms and mantras. The later versions of *Vedas* and *Mahābhārata* III refer to the prevalence of gambling, dancing and drinking in the society. Sometimes gambling houses attained royal patronage and share of the winning went to the treasury (Gour 1929:32). Buddha acknowledged the divine status of the old *Vedas* and ancient lore connected with them. He denied the mediating role of the Brāhman priestly class between god and man, as well as their monopoly over the**

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[1]***Sanskrit* word meaning 'the one who eats pure food'**

[2]***Sanskrit Kapil*, meaning 'red',*vastu*-'earth', i.e., referring to 'of red earth'. The city of Kapilavastu was situated about one hundred miles northeast of the city of Benaras and thirty or forty miles south of Himalaya**

religious and social life. He also attacked the caste system that shocked the priestly class (Barua 1967:180).

3.1.2 Early Educationof Siddharta: **Prince Siddharta received the best education of his time. He was sent to school under the tutelage of Vishvamitr. His studies must have included general scheme of studies prescribed for the princes, i.e., the *vedas*, physical education, grammar and arithmetic (Singh 2009:241). The Gandhāran relief manifests his education. Numerous relief panels show Prince Siddharta going to school on a ram (Qamar 2004:205). One such relief from Nawagai Swat shows four school companions standing on upper margins of the work. Three of them carry ink stand in their left hand, and wooden writing tablets with a handle in their right hand (Ackermann 1975:76-77; See Appendix 2). A variety of scenes show 'Siddharta's First Day in School'. For instance, he is shown going to school on ram, hailed with three school mates, holding a bowl and a water pot called *Kamandalu*. Vasumitra is holding a writing board on his knees. One student is carrying a writing board, while other two are carrying ink pots; in another instance Siddharta is shown holding wooden board across his knees. He is writing sixty-four alphabets, while his school fellows are looking at him in surprise. In a similar fragment Vasumitra is holding writing slate in such a way that spectators of the relief could see the writing. The Kharoshthī words on the slate read as: "The Welfare of oneself and the others" (Ingholt 1957: Fig. 22 & 25; See Pl. 1a & b, 2a; see Table no. 2 & 3).**

The phrase may correspond to the Māhayāna tradition of the highest knowledge meant for the welfare of all human beings. The literary evidence supports the archaeological evidence. Aśvaghoṣa in his *Buddhacarita.II.24 & 35* mentions that Gautama learnt all sciences soon after his first initiation, the mastering of which generally required several years. Moreover, he did not learn science to cause suffering to others, but studied only the knowledge that was beneficent to others (Aśvaghoṣa & Hamilton 2004:25; Chandra 1988:49).

His higher education is also apparent in his competition for marriage, where he is said to have won the calligraphy, arithmetic, archery and wrestling over five hundred other Śakya youths (Gour 1929:85). His physical education is shown in wrestling competition to win the hand of beautiful Yaśodhara.

3.1.3 The Buddhist Philosophy ofEducation: **The Buddhist philosophy of education revolved around the religious, spiritual, moral, technical and intellectual development of students. The education system meant for monks emphasized the total personality**

development, i.e., mind, body, instincts, senses, emotions, souls and spirit (Reagon 2005:18).

The Buddhist philosophy of education revolved around the Mid-way and holistic personality development of an individual. The Mid-way path of moderation lies between two extremes, for instance, self indulgence and self torture (as was in vogue among ascetics at that time). It was a warning against all kinds of exaggeration and excessive virtues in social and religious practices. It caused a balanced approach towards life and regulation of one's impulses and behaviours. The Mid-way taught toleration for all kinds of differences, social or religious (Hamilton 2000:43; Mookerji 1955:72).

The Buddhist philosophy of education revolved around the 'Four Noble Truths', i.e., existence is unhappiness; unhappiness is caused by selfish cravings; selfish craving can be destroyed; and the way to remedyor'Eight Fold Path' (Khan 2009:174). The Eight Fold Path is elaborated as under:

Right view **(*samā-ditthi*) meaning the right way of seeing things was very important for the monks as well as the laymen. Right faith comes from right view.** Right thinking **(*samyak-samkalpa*)is referred to right thinking about one's positionin act and attitude of mind. The (Krishate mind is a result of the right thinking (Krishan 1982).** Right speech **(*samyag-vāc*) refers to refrain from telling lies, ill speaking, double tongue, slandering and loose mind. Right speech results in peace and happiness and the otherwise in quarrel, antipathy, and suspicion.**Right body action **(*samyak-karmanta*)right action(such as charity and saving others' lives) benefits the individual as well as the community leading to peace and tranquillity,while harmful actions (such as harming others, killing, stealing and lust)are evils to oneselfandothers.** Right living **(*samyag-ājiva*) refers to the right routine and time tabling in everyday, month and year.**Right effort **(*samyag-vyāma*) refers to the fact that nothing could be attained without right courage and effort.** Right remembrance **(*samyak-smrti*) refers to the right consciousness and right reflection.**Right meditation **(*samyak-samādhi*) teaches that one's mind should always be in control. Even lower grade of mental control is important in everyday life (Abeysekera 2002:53; Mizuno 1969:173). The 'Eight Fold Path'usually divided into three catagories comprises the whole range of Buddhist discipline, i.e., moral conduct (right speech, right action, and right livelihood), mental discipline (right effort, right mindfulness and right concentration) and intuitive insight or wisdom (right view, and right intentions).The *Nagara Sūtra*relates that the 'Eight Fold Path' was not a new invention of the Buddha, rather it was an old path already followed by all previous Buddhas.**

The Buddhistsa advocated for non-violence, pity, self-sacrifice, and fraternity, prejudice free intelligence, and purity of character. Their education system led to personality development, intellectual and scholastic, as well as moral and ethical. Loizze (2011:432) asserts that the 'Four Noble Truths' and the 'Eight Fold Path' was a psycho-analytical method by which one could do self analysis and self healing. The Buddhist psychology is comparable to the modern concepts of Idealist and Neuro-science Pshychology by the latest brain researchers (Collins 2010:14; Majumdar 1995:34; Yun, Hsing 2000:45, 54).

The Buddha's teaching methodology was a prototype of the scientific approach towards education. Buddha was a public teacher for about half a *c.*. He adopted the pedagogy of oral sermons in the local vernacular. He used multiple pedagogies to teach religion to common people, e.g., different interpretations and explanations, through parables and stories. The Buddhist legends mention that his sermons were attended by crowds of people in both sexes (Che'n 1973:379). Buddha's positive method of teaching changed the basic philosophy of life of the common masses.

3.2 The Development of Buddhist Education System in Greater Gandhāra

The Chinese rendered Gandhāra teachers highly educated in various schools of Philosophy. Nāgarjūna, generally considered as the father of the Māhayāna Movement; Charaka, the court physician of Kaniśka; Acharya Nagasen, the author of *Milindapañha*, all belonged to ancient Gandhāra. Huan Tsang mentioned four great teachers as four shining stars, i.e., Aśvaghoṣa in the east, Deva in the south, Nāgarjūna in the west and Kumaralabdha in the north.Kumarajiva translated the biographies of Nāgarjūna, his student Aryadeva, and Aśvaghoṣa (Rongxi 1995). Paramartha translated the biography of Vasubandhu; later all were included in Taisho Shinshu Daizokyo. The biographies of Kāśyapa Matanga and *Chu Fa-Lan* are given in *Kao-sheng-chuan*. Kaśmir, Peshawar and Uḍḍiyāna Valleys attained the zenith of Buddhist learning at Kaniśka Period. Taxila, the traditional centre of learning was perhaps under the hegemony of Kaśmir at that time. The following section provides a succint overview of these centers of learning (Chaudhuri 2008:4; Gupta 2002:90; Watters 1904:286).

3.2.1 Taxila: **According to the oldest *Jātaka* Taxila was the *Rājdhāni* (capital) of Gandhāra, where once *Naggali* ruled. It was a walled city with city gates, towers and resthouses and the city walls were being contionuously repaired. Taxila was associated with the art of recovering buried or lost treasures (Fausboll 1877-97: 116).**

Huan Tsang refers to an old ruinous monastery at Taxila where the *Śāstra* master Kumaralabdha, the founder of Sautrantika, composed several treatises which were

widely read and known. Tanatha mentions him as a great teacher, who was celebrated over the Buddhist world for his genius and his great learning (Watters 2009:169). It seems that the Sautrantikas lost their fame after Vasubandhu. Sautrantika School has been followed in Ceylon. Their book is *Agama*. The Sautrantika and Vaibhshikas both belonged to Hinayana, developing in Northwestern Provinces, but possess different traditions (Beal *n.d.*b: lxvi; Dar 1998:9; Mookerji 2003:332; Watters 1904:286).

The Journal of the International Association of Buddhist Studies, Japan is attributed to the study of the origin and development of Sautrantikas. The Vasumitra's *Samayabhedopara Canacakra* translated by Huan Tsang and some works of his disciple *K'uei-chi* provide some information on them. Sautrantikas probably bridged the philosophies of the Hinayana Sarvastivadans and Māhayāna Yogācāra. We find some references of Sautrantikas in the Dignaga's work, who constructed a system of pure sensation closer to the Sautrantikas' position. Dignaga tried to establish some compromise between the idealism of Yogacāra and the staunch realism of Sautrantika (Datta 2009: 24; Kritzer 2005: xxvi).

3.2.2Kaśmir: **Kaśmir played a significant role in development and evolution of Buddhism. The Kaśmiri monks were famous even at the time of Aśoke. Kaśmir was a meeting point from Mediterranean region, the south and the centre of the Indian Subcontinent. Gilgit was an important trans-continental junction. Taxila was a dependency of Kaśmir when Huan Tsang reached there. Kaśmir remained a stronghold of Sarvastivadans in 5th *c.* CE (Dar 1984:256; Ingholt 1957:13).**

Several Buddhist monks from Central Asia and other parts of the Indian Subcontinent traveled to Kaśmir to learn the tenets of Buddhism by 5th *c.* CE. In the beginning of the 5th *c.* CE the eastern Turks who ruled Mangolia, translated many Buddhist texts into old Turk language, with help of monks in Gandhāra and Kaśmir.

Huan Tsang stayed at Kaśmir for two years to learn Buddhist *Śāstra*. He mentioned several hundred monasteries and several thousand monks in Kaśmir (Watters 2009:181). According to Huan Tsang Viśuddhasimha and Jina bandhu were the authority on Māhayāna philosophy, Sugatasimha and Vasumitra were masters of Sarvastivada, and Jinatrata was the last word on Māhāsañghika School. He also referred to Sanghabhūti (381 CE), Vimalāksa and Dharmamitra. Dharmadhātu reached Kaśmir in 729 CE. He stayed in Moung-ti Vihara for four years and studied the seven sections of *Vināya* (Pushp 2001:35). Yasa, the Hinayanist, was a Kaśmiri scholar who provided assistance to Huan Tsang in the translations of the Buddhist texts. Later a host

of Kaśmiri scholars preached the Buddhist learning in the valley and also in the neighboring countries of Central Asia, China and Tibet (Kaw 2001:88). The following sub-section provides an overview of the scholarly contributions of Nagasena and Nāgarjūna, and contributions of a few other graduates of Kaśmir to the Chinese Buddhism.

i) Nagasena: **The preceptor of King Menander, the author of *Milindapañha,* i.e., the 'Questions of King Milinda' and Nagasena, acquired the doctrinal knowledge of Buddhism from Yona Dhammarakkhita during his stay in the Vihara of Aśokerama in Kaśmir, built by Aśoke. The original version of *Milindapañha* was written with exceptional literary and dialectical skill in Gandhāri Prakrit, with later versions in *Sanskrit.* Several schools used *Milindapañha*as as their primary text of study. The original version is lost, but its copies survive in Chinese and Pali translations. It was first translated in Chinese in 4th or 5th *c.* CE, and re-translated in 8th *c.* CE under the title *Nasien-Bhikku-king,* i.e, Book of Monk Nagasena.The Chinese version is said to be closer to the original text. The Pali versions are extant in Śri Lanka, Burma and Thailand (Bopearacchi 1995:33; Rhys 2000:6; Sen 1999:91; Vassiliades 2000:95).**

ii) Nāgarjūna and the Māhāyana Sūtras: **Nāgarjūna appeared in the Kaniśka's time as a leader of the Madhyamika Sect that eventually led to Māhayāna school of Buddhism. He was first to teach distinctively Māhayānist doctrine of *Sunyata* and *Madhyamika* dialectic. He is described14th among the twenty eight great patriarchs of the Chinese Buddhist canon (Soothill & Lewis 2004:22; Soper 1959:14; Zürcher 1972).**

The Nāgarjūna's provenance and his dates are widely disputed among the scholars. Nāgarjūna's biographies were written and re-written and translated from Prakrit and *Sanskrit* throughout the Indian subcontinent, China and Tibet. He was a living legend throughout the history of Māhayāna Buddhism and numesrou Buddhist center in the Indian Subcontinent claimed him as their resident. Tāranatha and Buston locate early Māhayāna to Andhra Pradesh; however, Ettienne Lamotte[1] (Walser 2005:21) mentions that the connection of South India with Nāgarjūna is scientifically and logically incorrect. He supports the Kulhana's Rājataranginī placement of Nāgarjūna in Kaśmir. Kulhana mentions Nāgarjūna as living at Sadarhadvana during the reign of Huśka, Juśka or Kaniśka. Stein identified Sadarhadvana with the modern village of Harvan, near Srinagar. Lamotte points out that the Māhayāna movement was started in Gandhāra and later on moved southwards. He asserted that Māhāyana texts ascribed to

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[1] The pioneer translator of Nāgarjūna's philosophy in a Western language

Nāgarjūna[1] contain specific references to geography and people of Northwest and Central Asia; the *Mahāprajñā pāramitopadeśa* was clearly written in North. The Māhayāna precepts were first initiated by Nāgarjūna and the travel accounts of Fa Hien (5th *c.* CE) and Huan Tsang (7th *c.* CE) point out predominance of Māhyānist monasteries in Northwestern Provinces and none in Magadha. The Māhayāna movement started in Indus Valley and Kaśmir (Williams 2009:158). The paleographic evidence also reveals the earliest Māhayāna monasteries in Gandhāra.The British Library collection of 1994 expedition contains twenty nine birch bark scrolls written in Kharoshṭhī, revealing the earliest Dharmaguptaka monastery at Peshawar or the village of Hadda. According to Paramartha the earliest Māhayāna sects of Dharmaguptaka and Bahuśrutiyas were confined to Mathura and Gandhāra in early centuries of the Christian Era. Xinru Lu maintained that a majority of the Māhāyana Sūtras[2] referring to 'Seven Jewels[3]' were composed in Kaśmir, Taxila, Afghanistan, Nasik and Barygaza and Central Asia (Walser 2005:22). The scholars believe that Māhayāna Buddhism was started in Northwestern regions. The earliest Māhayāna transaltions in China are known from Lokakshema of Kuśan country. Morgan (1956:185) also ascribes the origin of Māhayāna Buddhism to Northwest India.The four scriptures, i.e. *Prajnaparamita Sūtra, Vimalakirtinirdeśa Sūtra, Saddharma Pundarika Sūtra* and *Sukhavati Sūtra* of Nāgarjūna, Asanga and Vasubandhu, were pivotal to rise of Māhayāna precepts in Northwestern India, and subsequent spread of Māhayāna movement to other parts of India and Asia. Fatone (1981:6) rejects the legendary placement of Nāgarjūna at Nalanda, and maintained that he belonged to a much earlier period than the prime days of Nalanda University. Nāgarjūna belonged to an era prior to 3rd *c.* CE as instanced by a goodwill mission from the Gandhāran King Vasudeva visiting the Chinese court at Loyang in 299 CE. They found the Chinese Emperor an enthusiastic follower of Nāgarjūna (Morgan 1956:187). The travel accounts of I-Ching mention the poets of Kaśmir singing the Nāgarjūna's songs. However, he also mentioned that the legendary fame of Nāgarjūna captured the whole India and there was no one who did not read Nāgarjūna. Nonetheless, various scholars went long way assort historicity from legend

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[1]E.g. the *Mañjuśrīmūlakalpa,* the *Mahākarunāpundarīka,* and the *Mahāprajñā pāramitopadeśa*

[2] i.e., *Saddharma Pundarika, the Pitaputrasamāgama, the Boddhisattvapitaka, the Tathagataguhya Sūtra, the Śsatesahasrika Prajnapāramita*

[3]*Suvarna,* i.e., gold, *rupya*-silver, *vaidurya*-lapis lazuli, *sphātika*-crystal or quartz, *mukta*-pearl, *lohitika*-a red precious stone or coral, *musāragalva*-ammonite, and *agate*-coral

in *Sanskrit,* Chinese and Tibetan languages [1](Bocking 1995:98; Fatone 1981:5-6, Śāstri, *n.d.* 11).

Nāgarjūna is ranked among the greatest of the Indian Buddhist philosophers. His teachings focus on the Buddha's doctrine of Mid-way, which advocates a life lived between the two extremes of a rigorous ascetism and an overt worldly indulgence. He brought a revolutionary change in traditional Buddhist concepts, through his theories on *sunyata* (emptiness) and *boddhissattvas*. The 'Treatise on the Middle' was translated to Chinese by *Chūng lun*, as early as 3rd *c.* CE. The text was later thoroughly revised by Kumarajiva. The translation makes a part of *Taisho Shinshu Daizokyo* (T: 564), the standard Japanese edition of the Chinese Canon, largely based on the Korean Tripitaka. The San Lun School and the T'ien-t'ai Schools based their philosophy on the Middle Treatise. The Chinese Buddhist monasteries in 5th *c.* CE were refered as *Kongmen,* i.e., the Gate (or House) of Emptiness (Collinson, Kathryn and Robert 2000: 96; Yifa 2002:246).

Nāgārjuna maintained that Buddha taught emptiness, and it contributed towards the ultimate Nirvana. He rejected the idea of traditional *Arhat,* and brought forth the concept of *boddhissattvas,* dedicated to the service of others. Nāgarjūna was the one who first introduced the words the 'Great Vehicle', or'Māhayāna', meaning to produce great compassion and arouse the unexcelled mind (Middle Stanza.18:12 and 25b23), and *Tathagatha*, meaning 'Thus Comes; one whose coming into the World is like the coming of his predecessors (Bocking 1995:74, 285).

Nāgarjūna devoted completely the Middle Stanza.ch.22 to the analysis of *Tathagatha*. *Tathagatha* had no self and he was the only one who actually perceived things as they really were, as he had no *Karmic* burden. He was least afflicted by anger, delusion and other passions. He was incomprehensible to the ordinary minds. The Madhyamika philosophy introduced the revolutionary concept of Buddha Nature in every human being. Everyone could become Buddha by following the Mid-way propounded by the historic Buddha-a hope that any one could become Buddha. Middle Stanza.24, entitled as 'Contemplation of Four Truths', is generally regarded as a definitive statement of Nāgarjūna's position on emptiness (Bocking 1995: 26-29, 74-87).

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[1] For instance, Walleser in 'The Life of Nāgārjuna from Tibetan and Chinese Sources' worked with Lankavatara, Manjuśrimulakalpa, Rajatarangini and Harsacarita to highlight Nāgārjuna provenance (Śāstri *n.d.* 10).

The *Madhyamika Śāstras* of Nāgarjūna[1] were translated into Chinese by Kumarajiva. About six texts of *Prajnaparamita*[2] were translated into Chinese between 3rd-6th *c.* CE. These texts formed basis of Māhayāna Buddhism in China and proved to be very influential in converting the Chinese population into Buddhism. In the 3rd *c.* CE the *Prajnaparamita Sūtra* was systematized in the form of 'Prajna study' in China. The quest for the real meaning of the Prajna's concept of Sunyata was pursued with vigour (Bagchi 1981:173; Kamata 1999; Morgan 1956:182).

The verses 231 and 232 of Nāgarjūna's *Ratnavali* reveal a long list of construction and public projects that a king should perform for the welfare of his people. Nāgarjūna in his Ratnavali teaches king to save himself through neutrality (*upeksā*) when there is a dissent among people or monks. *Upeksā* was recognized as a Royal *upāya* or strategy to resolve conflicts (Walser 2005:120).

3.2.3 Peshawar[3]: **Huan Tsang describes Peshawar as the core of Kaniśka Empire with its northern extension to Swat and Buner Districts and eastern extension along the River Indus (Ingholt 1957:13). It has variously been described as Kukkuta in some *Jātaka* and *Vināya* texts and *paccantimam-nagara*, i.e. a frontier town of the King Mahākappina in Apadāna.II.469 (Sarao 2010:160). The popular traditions reveal that Mahākappina had sent men from its four gates to look for the learned men. A trade route existed between the city of Sāvathi and Kukkuta. The Dictionary of Pali proper names (1.850) and *Dhammapada.II.116ff* mention that three rivers were crossed to reach Sāvathi, i.e., *Aravacchā,* the *Nilavāhanā* and the *Candabhāgā,* i.e, Chenab. Al-Bīrūnī describes the Kaniśka Tope as the *Vihara* of *Purushāvar*, built by King Kaniśka. *Kanika-Mahā-Vihara* of Kittoes inscription described that the best teachers were found there (Beal 1878; Watters 1904:208). Foucher describes the *Shah ji-ki-Dheri* at Peshawar as a great Buddhist education centre, where the Buddhist teachers of exceptional fame and intellect lived.**

The word 'Peshawar' appeared first time in the Ara inscription (Dani 1995:55; Dani 1997). Fa Hien described it as a 'City of Heroes'. The Chinese chronicle *Su-kao-seng-*

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[1]E.g., *Mahaprajnaparamita Sūtra śāstra, Daśabhumi Vibhasa śāstra*. Nāgarjūna's *Dvādaśa-dvara* (The Twelve Gates), *Nyayaduāraka Tarka śāstra, the Madhyān Tānugama śāstra, Dvādaśanikāya śāstra* and the *Prajñapāramita Śāstra*.

[2]*Prajnaparamita Sūtra, Śatasāhasrika, the Pancavimśati-Sahasrika, the Daśāsahasrika, the Pancaśatikā and the Saptasotika*

[3] Already published as,
2015 The Contributions of Peshawar Teachers in Development of Mahayāna Buddhism in Gandhāra (1st-6th cent. CE). *Journal of Asian Civilizations*, 38 (1), 77-88

chuan **mentioned Peshawar as *Chang-fu-kung* (Hero's place). Huan Tsang places Narayana Deva, *Wu-cho* or Asanga P'usa, *Shih-ch'in* or Vasubandhu P'usa, Dharmatrata, Manoratha and *Po-li-ssu-fo* or Pārśva the Venerable, Vasumitra (*Chung-shih-fen*), a composer of *Abhidharmaprakana-pāda* and Dharmakrāta, who composed *Samkyuktābhū DharmaŚāstra* as native of the Peshawar District. The treatises of Pārśva are not preserved. However, Manoratha had composed Vibhāsha lun in 150 CE. Dharmatrata compiled *Tsa-Abhidharma lun* (Beal 1884). Huan Tsang mentioned the chamber of Parsvika where Vasubandhu prepared his *Abhidharmakosa Śāstra,* and Manorhita composed Vibhasa Śāstra (Dani 1995:51). The Chinese chronicles state twenty eight patriarchs of Buddhism, among whom Aśvaghoṣa is described as the 12th- only next to Punyatayaśa, and Vasubandhu as 21st patriarch. In Japan Aśvaghoṣa is regarded as a teacher of Pure Land School, the first patriarch of the *Avatamsaka Sūtra* Sect and twelfth of the Contemplatist School (Soothill & Lewis 2004:22; Watters 1904:104, 214 & 274).**

i) Aśvaghoṣa[1]**: (*ca.* 100 CE) the disciple of Pārśva the elder, the author of Buddhacharita, was among the celebrities of the Kaniśka's Empire. Ettione Lamotte, the earliest translator of Buddhacharita, gives him the dates 128-51 CE, while Richard Robinson, William Johnson and Thanissaro Bhikku assigned him to the Kaniśka reign, at the beginning of the Christian Era (Hiltebeitel 2006:233). He is considered as the India's greatest poet before Kalidasa, and also the 'Father of the Indian Drama'. The legendary accounts narrate that he belonged to *Madhyadeśa*[2], but was given to Kaniśka as war booty. Merium-Webster Encyclopedia (1995:80) placed him either to Ayodhya or Peshawar. Hewever, Warder (1990:180) maintained that there were ample references to the country of Gandhāra in *Buddhacarita,* suggesting a connection of the writer with that country. The Chinese translations of his biography reveal that he preached the *Dharma* doctrine) extensively in North India (Chaudhuri 2008:18).**

The drama, the actors and the school of actors (i.e., *Śailālins*) probably existed in Gandhāra since Vedic period. Patton (2008:1) is of the opinion that *Vedas* served as a

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[1]***Samskrit*** **meaning, 'Horse's Voice'; the *Maming Pusa* of Huan Tsang**

[2] **The Buddhist accounts used the term *Madhyadeśa* for the whole North India from Punjab to Bihar (Bagchi 1981: 41). At the wake of the British Colonisation, the whole North India was called as Madhyadeśa to distinguish it from Himalayan Ranges or the Southern plains (Risley 1977: 32). Later, the British scholars translated the same term as Central India. However, recently the the scholars have largely challenged the traditional rendering of the term Madhyadeśa to the geographical territory. They rather suggested the term *Maddhyoddeśika/Madhy'yddeśika* meaning 'Intermediate language/recitation' referring to Gandhari Prakrit (Yuyuma 2001: xviii).**

model for *kavya* literature. Páńini described the Prakritized form of *Nataka*. He described the existence of distinct Nata Sūtras, the manuals for the use of *natas*, and attributed one to Śilalin and other to Krišaśva. Their adherents were called as *Śilalinas* and *Krišaśviras* respectively. Kautilya and Patanjali also referred to the theatrical companies. Drama and puppet plays were well developed at the wake of the Alexander's invasion in Gandhāra (Passi 1982; Warder 1990:76, Weber 1904:197).

In any case, Aśvaghoṣa was the first great *Sanskrit* poet whose Kavya is extant. *Buddhacarita* is a forerunner of the Nātyaśāstra. His *Kavya* reveals the ornate style consisted of *sloka, upajāti, the sālini, vanśasthā, praharsini*, etc. He wrote down in simple language, but with logical arrangements of the plot and the dialogues. The oldest version of *Buddhacarita* dates back to 2nd *c.* CE. The existing versions of *Budhacarita* exist in *Sanskrit*, Chinese and the Tibetan literature. The Turfan manuscripts include excerpts from the writing of *Budhacarita* and also from the two other dramas, known as *Sariputra-prakarana* and *Saundaranaenda*, exhibiting the court poetry. The *Rashtrapalanataka* is also attributed to him (Keith 1992:90; Kurtz 1998; Richmond, Darius & Phillip 1993:53). Aśvaghoṣa's style influenced later *kavya* writers like Mātrceta, Sūra, Bhāsa, Iśvaradatta, Kalidasa and Bana. He was famous for explaining the intricate Māhayāna concepts in a simple language, a potent vehicle for the Buddhist teachings (Litvinski, Zhang &Shabani 1999:441; Sutton 1991:128; Warder 1990:181).

Aśvaghoṣa was well versed in *Vedic* literature, i.e., *Vedangas*, National Epics, *Purānas*, the philosophy of the Samkhya yoge, Dharmaśāstra, Kamaśāstra, different arts of music, architecture and sculpture, and used the similes and metaphors related to all arts. He was a master of comparison and the semantic extensions. The chronicles of I-Ching and Huan Tsang refer to the popularity of Aśvaghoṣa all over India, including Gandhāra. I-Ching reported *Saundarananda* to be narrated and understood by a large number of listeners in front of Buddhist shrines. Later, his *Buddhacarita* was popular in Samatra, Java, and the neighboring islands for several centuries (Datta 2001:252; Patton 2008:7).

ii) Vasubadhu and Asanga of Gandhāra: **were the renowned Māhayānists of 4th *c.* CE. They were the key figures in founding the Yogācāra School that was largely followed later on. Asanga attained a highest mastery in yoge practices, and reached the *prabhākari* (light giving one), i.e., the third stage of boddhissatvahood (King 1999:100). The Māhayāna traditions maintain that he had visionary experience of the Boddhissattva Meitreya in the Tuṣita heavens, whereupon *Yogācāra Bhumi Śāstra* was revealed to him. The *Yogācāra* School systematized the Buddha's teachings into three**

stages, i.e., *Abhidharma* was the first Wheel of Law, *Prajna Sūtra* the second, and *Vijnanavada* (*Yogācāra* School) was the last Wheel of Law (Morgan 1956:167; Sparham 1993). Of seventeen volumes of *Yogācāra Bhumi* the fifteenth, i.e., *Boddhissattvabhumi*[1] is the most popular. His *Māhayāna-Samgraha* (Compendium of Māhayāna) is an abbreviated summary of *Boddhissattvabhumi*. Asanga classified Sūtras in direct (*nita-artha*) and indirect (*neya artha*) meanings (Joshi 2002:260).

***Sūtra Alamkara*[2] is the practical side of *Yogācāra Bhumi*[3]. It describes the stages on the path of aspirant, actions, thought, and the studies that should accompany every stage.*Vidyāmātra Siddhi* was a standard manual for all students of the *Yogācāra* system. It was also considered necessary for all priests of other schools to have read through it. It was a clear, concise and logic form of exposition that asserted the principle of accepting only those things which could be proved by reason or experience. Asanga introduced various modifications in mystic and ritualistic Māhayāna and developed it into a systematic school of thought (Mc. Govern 2000:20, 35).**

The details of the Vasubandhu's life are known from several biographies in the Chinese and Tibetan, the earliest of which is by Paramārtha's *P'o-su-p'an-tou-fa-shih chuan* (6th *c.* CE) (Kritzer 2005:xxii; Vasubandhu and Stafon 1998:11). There are several references to Vasubandhu in the works of Huan Tsang, Bāna bhatta, Vāmana, and other writers. According to these biographies, Vasubandhu was born in *Purushapura* (present day Peshawar, Pakistan), around the year 316 CE. Huan Tsang mentions his house in the middle of *Purushapura* that was marked by a tablet. According to the Tibetan historian Tāranātha, Vasubandhu's father was a Hindu Brāhman, and a court priest who was well versed in *Vedas*. Vasubandhu turned to a Māhayānist after reading the *Śatesāhasrikāprajnā-pāramitra Sūtra* of his half brother Asanga. His commentary on *Aksayamatinirdeśa-Sūtra* and the *Daśa-bhūmika* may be his earliest Māhayāna works,

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[1] translated into Chinese by Dharmaksema in 418 CE

[2] Aśvaghoṣa also wrote *Sūtra Alamkara,* but his contents were different from the *Sūtra Alamkara* of Asanga.

[3] *Yogācāra Bhumi* constitutes one of the earliest translations of Yogacāra School in Chinese and Tibetan languages. *Māhayāna-sūtra-lamkara, Madhyānta-vibhāga and Dharma-dharmatā-vibhaga* (all related to Meitreya) and three śāstras of Asanga, i.e., *Hsein-yang-shang-chiao-lun,Abhidharma-samuccaya* and *Mahāyana-samgraha* are the earliest Yogacarin texts, followed by *Samdhi-nirmocana-sūtra* and *Mahāyānankhi-dharma-Sūtra*. Early Yogācāra texts also include six śāstra by Vasubandhu, i.e., *Vyākhyāyukti, Karma-siddhi-prarana, Pratityasamutpādavyākhyā, Panca-askandhaka Vimśatikā and Trimśikā* (Kritzer 2005: xii). Other books ascribed to Asanga and Vasubandhu include *Arya-vaca Prakarana, Abhidharama Sangiti, Māhayāna Samparigraha, Yoga vibhaga, Daśa bhumika Pratyaya Śāstra, Madhyanta Vibhaga, Alambana Pratyaya Śāstra, Pramāna Samuccaya and Vidyāmātra Siddhi* (Mc Govern 2000).

followed by a series of other Māhayāna Sūtras and treatises. *Ju-shih Lun* (*Tarka Śāstra*) survives in Chinese, translated by Parāmartha in 6th *c.* CE. Paramārtha belonging to Ujjiyani was a great proponent of the doctrines of Vasubandhu's *Abhidharma-kośa* and Asanga's *Māhayāna-Samparigraha* in China. The *K'ai-yuan shih-chia-lu* catalogues that Dharmagupta studied *Ju-shih Lun* and other texts at the local monasteries of the kingdom of Sha-lö (present Hsin-chian), while he stayed there for two years (Vasubandhu and Stafon 1998:16; Vassiliev 1937:1016).

The Vasubandhu's logical works mark a new period of the Buddhist literature. The original Vasubandhu's works have disappeared, but the quotations and fragments refer to his original works. Moreover, his treatises have variously been re-written in the Indian subcontinent, and translated across Asia. The *Abhidharmakośa* profoundly influenced subsequent Buddhism and the study of *Abhidharmakośa* and commentaries on it became a major activity of the Abhidharama researchers. Vasumitra wrote a commentary on *Abhidharmakośa* (Hirakawa & Paul 1993:137). Huan Tsang translated the Vasubandhu's verses into Chinese[1] (Waymen 1997:115). The *Vidyā-matra-Siddhi* of Vasubandhu became a text of the commentaries and a standard manual for all students of the *yogācārin* system. In Far Eastern countries it was considered necessary for the priests of all other schools to have read it (Lieu 2006: 220; Mc. Govern 2000:35).

iii) Jinangupta: **(557 CE) was a *Kṣatrya* of *Purushapura* who visited to Badakhshan and Wakhan in 6th *c.* CE. Jinayasa was his *upadhyaya* and Juanbhadra was his *acharya*. At the age of twenty seven, he joined his teachers to form a company of ten travelers to China, of whom only four names survived, i.e., Yosagupta in addition to Jinangupta and his two teachers already mentioned. The Emperor constructed a temple for them and formed a board of translators. He reached China through Khotan, stayed at Mahavana Monastery and worked arduously for the propagation of Buddhism till his death. Different numbers of translations are attributed to him. Kumar (2005:140) describes four works to him, while Bakhshi & Lipi (2000:256-257) attribute thirty six translations to him. According to Bagchi (1981:268) he first translated four, while later he translated thirty nine texts in the Chinese language, including a rendering of *Buddhacarita Samgraha Sūtra* and *Suddharma Pundarika*. However, it is commonly held that he along with his group of two teachers caused a**

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[1] **i.e., *Vijñaptimātratāsiddhi, Vimshatika Vijnapti* (Proof in Twenty (verses) of Representations Only) and *Trimshika Vijnapti* (Proof in Thirty (verses) of Representations Only)**

renaissance of study of Buddhism in China under Sui Dynasty (Yuyuma 2001: xxvii).

3.2.4 Swat Valley: **Swat is the *Wu-chang-na* (park) of Fa Hein, *Ou-chang* of Songyun, *Wu tien-nang* of *Shih-hu* of Song Period, *Uyyaya* of the Pali Canon. The excavations of the Federal Department of Archaeology of Pakistan, and Department of Archaeology, University of Peshawar, as well as Foreign Missions, especially the Italian Mission in Pakistan has provided a secure chronological framework of the Buddhist monasteries of Swat Valley. Swat was a flourishing center of Buddhism since Saka-Parthian period and it remained so throughout Kuśan and Later Kuśan periods. The urban settlement at Mingora, besides Butkara I is among the first Buddhist establishments in Gandhāra (Callieri 1989:60).**

The Ph. D thesis of Mohammad Farooq Swāti provides an overview of the economical and geographical situation of the Buddhist monasteries in Swat valley. Swat in ancient times was a home of multi-tribal units. However, judging from its Buddhist vestiges, it could be conjectured that Buddhism was widely spread in the area from 3rd *c.* BCE to 8th *c.* CE (Swāti 1996:12; Swāti 1997:19). Fa Hien found Buddhism in flourishing condition in Uḍḍiyāna in the 5th *c.* CE. Songyun (7th*c.* CE) describes Uḍḍiyāna as a country of fertility and high production. Buddha was adored in the mornings and evenings with the sounds of drum conch, vina flute and all kinds of wind instruments. It was here that Avaloketiśvara delivered one child and *boddhissatva* gave his body to the hungry tigress (Beal *n.d.*a:188). Huan Tsang (629-645 CE) describes it as a country of gold and saffron, divided into four districts, i.e., Panjkora, Bajawar, Swat and Buner; a country of imaginative lore where several *Jātaka* originated around the River Swat (Lahiri 1995:47; Watters 1904:225). He mentioned *lo-lo* or *Apalala* Dragon spring as the source of the River Swat. Alberuni also mentioned the 'white waters' of River Swat, and commented on the people's common belief that the river had become white because *Mahadeva* had taken a bath in it. Huan Tsang took with him numerious copies of the Canon of Kaśyaoiyas, a Hinayana sect of Uḍḍiyāna. Both Songyun and Huan Tsang mentioned the Tantric Buddhism flourishing in the Swat Valley. The monks had a high knowledge of spells and magical exorcism, and they made it a means of their living. Uḍḍiyāna remained renowned for holding Buddha relics till 7th *c.* CE, or perhaps later. Wang Xuance, the Chinese military officer, was sent thrice as a head of Imperial envoy to India under two Chinese Emperors Wang Taizang and Gaozong in 7th *c.* CE. While coming back from his third expedition, he brought back the skull relic of Buddha from

Uḍḍiyāna and presented it to the Emperor in 661 CE (Beal 1884: xvii; Mc Nair 2007:96; Waley 1952:71; White 2004:62).

I-Ching narrates in his "Biographies of Eminent Monks of the T'ang Who Sought the Dharma in the Western Regions" that three Chinese pilgrims travelled to Uḍḍiyāna before his visit and worshipped the Skull of Buddha there. We also find reference to *Taolin* or *Fa-shih* who visited Uḍḍiyāna in search of proper methods of meditation and collected Prajna text there. His collection is one of the earliest of Māhayāna *Sūtras* in China. He also travelled to Kaśmir and noticed the influence of an altered *dharma*. The Chinese pilgrim *ou-King* (*Śramana* Dharmadhātu) stayed in *Jou-lo-li* nonastery in Gandhāra in 8th *c.* CE (Lahiri 1995:27-57; Thakur 1986:79).

i) Narendrayaśas **(556 CE) was monk from Uḍḍiyāna who was one of the ten ministers in the Ministry of Buddhist Affairs of the northern Qi Dynasty in 6th *c.* CE. He was given the title 'Zhaxuantong' and was placed incharge of a board of thirty translators by the Emperor. The translations of about fifteen works are attributed to him (Bakhi & Lipi 2000:255; Li Chongfeng 2011:392).**

ii) Vimoksasena: **(*Pi-mu-ch'e sien*) (541 CE) was the son of king of Uḍḍiyāna. He along with Vinitaruci (6th *c.* CE), translated six works in North China (Bagchi 1981:58, 276; Bakhshi & Lipi 2000:255).**

3.3 The Impact of Gandhāra Budhdism on China

Gandhāra played a vital role in dissemination of Buddhism in China. *Jibin* was the preferred route for pilgrims till T'ang Dynasty (7th *c.* CE). The term *Kipin*, or *Chipin*, or *Candahar* was interchangeably used for Kaśmir and Gandhāra. The Han chronicles (206BCE-220 CE) also use the term *ki-pai* or *chi-pai* collectively for Kaśmir and Gandhāra (I-Ching 1995: xvi). According to the old Chinese traditions, the Buddhist monks brought sūtras and *Vināya* across river Sindhu from 1st to 6th *c.* CE. Sengyu (445-518 CE) mentioned that '*Jibin* abounded saints and wisemen' (Li, Chonfeng 2008: 29-30). The *Jibin* route was an important route in Wei, Jin and Southern and Northern Dynasties. The Chinese pilgrims first visited *Sindhu* and then to the Ganges valley.

The Chinese translations of the Buddhist scriptures were carried out from Gandhāri Prakrit in the first few centuries of the Christian Era. The phonetic rendering of the Chinese earliest translations correspond to the Prakrit original. The *Sanskrit* rendering of the same scriptures with some new additions were carried out after Huan Tsang's translations in 7th *c.* CE (Foret & Andrees 2008:13; Suzuki 1930: 8). The translations of *Vimalakirtinirdeśa, Saddharma Pundarika, Mahaparinirvana Sūtra, Buddha Avatamsaka*

***Sūtra* and *Mahavaipulya Sūtra* of Nāgarjūna, Asanga and Vasubandhu formed basis of Māhayāna Buddhism in China (I-Ching 1986: xx).**

The Chinese histories[1] relate that the Han Emperor Ming Ti (57-75 CE) sent his emissary Chai Yin to Central Asia and 'Scythia' to learn more about Buddhism. The envoy returned after eleven years with a number of Buddhist scriptures, images and two Indian monks Kaśyapa Matanga and Dharmamitra; the pioneers who opened up a vast field of Buddhist work in China. Kaśyapa Matanga belonged to *Madhyadeśa,* but was residing and studying at Gandhāra at that time. The monks brought with them the 'Sūtra on Forty-two Sections', *Dasambhumi Sūtra* and *Lalita Vistar* (Nattier 2008: 35).

Songyun, Hui Sheng, Zhimeng and Fasheng, went to Jibin in search of the Buddhist texts in 4th-5th *c.* CE. Fayong (Dharmodgata) and his thirteen fellow pilgrims studied the local language of Jibin and took the copies of *Avalokiteśvara-mahasthamapraptavya-karera-sūtra* from there. They also visited *chin tou natine* (the *Sindhu*[2]); *Rouzhiguo* (Gandhāra) and worshipped *ushnishashiraSanskritata* (skull bone relic) there; and also the *Dandaloka* mountain. Fa Hien and his fellows stopped at Uḍḍiyana and travelled through *Svastu,* Hund, Taxila and Peshawar (Li, Chongfeng 2008: 29-30). Gautama Samghadeva (4th-5th CE) studied at Kaśmir with Budhabhadra. He carried out translations of the Buddhist scriptures into Chinese along with the Kaśmiri monk Sangharaksha. He translated The Heart of Abhidharma and Treatise on Three Dharmaskhandas; Vasumitra Sūtra (Anālayo 2006: 71; Bagchi 1981: 164, 275).

(i) Buddhabhadra: **was a famous translator and *Dhyana* master in China. His family was long settled in Nagarahara, Gandhāra. Rhie (2002a: 13) mentions that his family originally belonged to Kapilavastu, but he studied at Kaśmir. He reached China at the end of 4th *c.* CE and lived there in first few decades of 5th *c.* CE. He was noted for his *Vināya* and *Dhyana* practices. Buddhabhadra and Dharmamitra translated 'The Sūtra on the Sea of Mystic Ecstasy Attained by Visualising the Buddha', or the Sea Sūtra. The Sea Sūtra narrates that Buddha had a famous contest with *Naga* King *Apalala* in *Nagarahara* (Gandhāra) (Bagchi 1981: 174, 258; Soper 1959: 144, 191).**

The Kaśmirians Punyatrata and Vimalaksa translated *Sanskrit* texts into Chinese in collaboration with Kamarajiva. The Buddhayaśas of *Jibin,* the teacher of Kumarajiva, a

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[1]*Hsi-ching-fu* (Ode to the Western Capital), written by Chang heng (78-130 CE); *Mouu-tze,* a text composed in Southern China by the end of 2nd *c.* CE; the Royal History Wei Luch compiled by *Yu Huan* in 239-265 CE; and *Chu sanzang ji ji* of Songyou

[2]Also called as 'the Lion's Mouth' in Chinese

specialist of Vibhasa, visited China and worked with Kumārajiva. He translated eleven *Sanskrit* works into Chinese, among which most important were the Dharmagupta *Vināya* and Dirghagagāma Sūtra (Kaw 2001: 90; Puri 1993: 117). Dharmanandi was a native of Tukhara (Chaudhuri 2008: 89) and specifically located at Kaśmir by Ch'en (1973: 80). He reached Chang-an in 4th *c.* CE. He was a specialist of *Ekottarikagama* and *Madhyamagama* texts. He translated two *Agama* texts into Chinese. The Kaśmirian Dharmayaśas[1] along with his teacher Punyatrata reached at Chang'an in 4th *c.* CE and translated three works (Bagchi 1981: 265).

The Kaśmiri monks Gunavarman and Dharmamtra were patronized by the Sung Dynasty. Gunavarman (5th CE) was a *Vināya* master. He was originally a prince of the Kaśmirian Royal family but later ordained as a monk. He completed his education in Kaśmir and later travelled to China, Ceylon and Java on a missionary expedition. The earliest extant translation of *Suhrllekha*, the 'Nāgarjūna's Letters to his Patron King', was carried out by Gunavarman. He translated eleven other works into Chinese, including *Saddharma Pundarika* and the *Desabhumi Sūtra,* and also revised the translation of *Samyuktābhidharma-hrdaya-Sūtra* (Kaw 2001: 90; Walser 2005: 62).

Gunavarman is associated with the painting of Dipamkara and the miraculuous Manjuśri at Lu Shan. Sung Entry B ascribed to the missionary Gunavarman a painting of the scholar youth spreading his hair before Dipamkara in 420 CE. The cult was popular to both the Hinayana and the Māhayāna traditions (Soper 1959: 178). The Kaśmirian Dharmamitra (5th *c.* CE) established a Buddhist monastery at Dunhuang. He was a specialist in *Dhyana* practices and translated about twelve works of *Dhyana* into Chinese, including *Ch'an-fa-yao*; an important explanation of the laws of meditation. He drew the picture of the Kapila Deva and pasted it on the wall in the upper temple of *Ting-lin-hsia-ssu*. Later, the cult of the Kapila Deva became famous for miracles and swift respond to the prayers of the devotees in China (Soper 1959: 44, 106).

Baghchi (2008: 211, 260) refers to the translation works of two other Kaśmiri monks at Loyang. Buddhasanta from Northwestern Provinces reached Loyang in 6th *c.* CE and translated nine works into Chinese (Bagchi 1981: 260). Adisena a specialist of *vināya*, reached to Loyang in 693 CE and translated seven *Sanskrit* texts into Chinese. He founded a monastery named as *T'ien-chu-sse* (the Monastery of India) in Loyang.

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[1] ***T'an-mo-ye-she or Fa-ming*transliterated as *Fa-ch'eng*; Law Glory**

The Kaśmiri teacher Skadhila was the teacher of Sanghabhadra, who inturn was the teacher of Vimalamitra, the Sarvastivadans, who taught in the monasteries of Kaśmir. Their treatises are available in Chinese translations. Buddhavarman probably from Kaśmir translated *Mahavibhaśa Śāstra* in 5th *c.* CE (Bagchi 1981:260). The Kaśmirian Dharmabhiksu, Buddhajiva, Buddhasena and Budhdavarman also travelled to China in 5th *c.* CE (Devahuti 2002:83). The monk Sanghadanga of *Chipin* or *Kipin* came to China in *circa.* 345 CE and translated the 'The Dawn' or the 'Birth of Light Sūtra' of Dhammapada into Chinese (Beal 1884:24).

The Tibetan translations provide clues to the contributions of two other Kaśmiri teachers, i.e., Dharmatrata and Ravigupta. Dharmatrata (2nd *c.* CE) was a great Sarvastivadan of Kaśmir, supposedly an uncle of Vasumitra, who lived in Kaniśka's Period. *Udānavarga* found by Paul Pelliot and Grunmedel from Eastern Turkestan was possibly written by him. Its Brāhmī fragments were also found by Stein. The treatise was translated into Tibetan by Vidyākaraprabha or Vidyaprabhākara in collaboration with a Tibetan scholar named as Lotsava Rin-chen-mchog. Ravigupta emphasized that the doctrines of Nāgārjuna and Asanga were the same. Seven works of Ravigupta are preserved in the Tibetan language (Puri 1983:196). Bodhila was another Kaśmiri Buddhist teacher who lived in Māhāsañghika monastery located south of the Śankaracharya hills. He composed *Tattva-Sanghraha* (Kaw 2001:88).

The Chinese monks also travelled to Gandhāra for pilgrim and collected the Buddhist scriptures since 1st *c.* CE. I-Ching compiled the biography called as "Biographies of Eminent Monks of the T'ang Who Sought the Dharma in the Western Regions" of fifty six monks, describing several Chinese monks travelling to Gandhāra and Kaśmir. Fa-Hien (399 CE) was the earliest Chinese pilgrim to the Indian Subcontinent. Among the places he visited in Northwestern Provinces were Gandhāra, Uḍḍiyana, Peshawar, Taxila, and the 'Cave of Shadow' at Nagarahara (Ch'en 1973: 91). The *Samyuktāgama* texts of Mulasarvastivadan tradition, brought back by Fa Hien from Ceylon were translated by *Bao Yun*, based on the recitation of original by the Kaśmiri monk Gunabahdra. The Kaśmirian Buddhajiva also collaborated with Fa Hien (Anālayo 2006: 67).

The most accomplished Chinese Dhyana master, the pilgrim *Chih-yen* studied in Kaśmir for several years at the same time as Buddhabhadra (Soper 1959:219). Another Chinese pilgrim *Mo-ti-seng-ho*[1] stayed at *Lung-ch'ih-shan-Sssu* (*Nagahrada Parvata Vihara*) in

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[1]Transliterated as *K'e-his-mi-lo,*and Mālisimha or Prajnāsimha

Kaśmir, where five hundred Arhats enjoyed the Royal hospitality along with him every day. The Chinese traveler *Ou-k'eng* or *Wu-k'ong* while visiting Kaśmir in 8th *c.* CE reported over three hundred monasteries in Kaśmir, mainly belonging to Sarvastivadan. *Lung Fa Shih* or Gauravadharma of Lung died in Gandhāra (*Chien-t'a-lou*) on his sojourn to India (Ch'en 1973:239; Lahiri 1995:xviii).

Songyun (518 CE), a native of Tun-Huang or Little Tibet was sent to Gandhāra along with Hwui-seng, of Shung Li Temple of Loyang, by Empress Tai Hau of Northern Wei Dynasty. He came back with 175 volumes of the Buddhist scriptures. Honan Fu described their travel to Gandhāra in 'The Fifth Section of the History of Temples of Loyang". However details of the Buddhist scriptures brought back by him are not given. Hweui Sheng stayed in Peshawar and Uḍḍiyana for two years and returned to Loyang in 520 CE where he compiled his *Ch'ieh-lan chi*. According to his accounts he hired an expert in Peshawar to reproduce in bronze *Tsoih-li pagoda*, i.e., the multi-story stupa of Kaniśka, together with the *Jātaka* of the four stupas of Śakyamuni. Fa Hien also described his stay in Gandhāra and related that the *Jātaka* included the places where the boddhissattva ransomed a dove with his body; fed his body to the tigress and her cubs; given his eyes and given his brain; all places identified with Taxila and Uḍḍiyana. His accounts of Uḍḍiyana were also translated by Chavannes and others (Beal *n.d.*: xxxviii, 206; Thakur 1986: 15).

Huan Tsang not only visited important Buddhist center of Taxila, Uḍḍiyana, Peshawar and Kaśmir, but he also reached the Lower Indus Valley and visited Sind and Mekran, which according to him were mainly Buddhist (Chattopadhyaya 2002: 26). He had initially decided to travel to India in order to clear his concepts on *Yogācāra* Idealism of Asanga and Vasubandhu. The *Yogācāra* doctrines were widely followed in Uḍḍiyana, Kaśmir and many other places in Gandhāra at that time. The Bhadantayaśas was the preceptor of Huan Tsang in *Abhidharmakośa* while he stayed at Kaśmir. Huan Tsang reports that twenty scribes helped him to copy the text, at *Che-ye-in-to* (*Jeyandra Vihara*) in Kaśmir (Muller 1896: xxii; Pushp 2001: 37). Nonethelss, the teaching was oral and the text was not easily available in the monasteries of Gandhāra. The Yogācāra School had already travelled to the Nalanda University and Valabhi University through the line of Dignāga (5th *c.* CE), Agotra, and Dharmapāla. Huan Tsang decided to travel to Nalanda University where he was a student of one hundred and six years old Śilabhadra. He taught him the Yogācāra Idealism, mainly through Vasubandhu's *Vijñāptimātrata* (Completion of Mere Ideation) and *Abhidharmakośa*. Śilabhadra was

from a direct line of transmission from Asanga and Vasuandhu (Takakusu 1998: 85; Watters 1904: 5; Yung-hsi 2005: 39).

Huan Tsang carried back treatises of several schools, i.e., Sarvastivadan, Theravada, Mahasañghika, Sammatuya, Mahiśāsaka, Kaśyapiya and Dharmaguptaka, but he translated only Asanga and Vasubandhu's texts and various commentaries on their treatises[1] (Hirakawa & Paul 1993: 133). The translations of Huan Tsang's school divide the Indian logic into two periods, first a non-Buddhist period ascribed to Aksapāda, and the second to Vasubandhu. His *Chü-she* text based on Vasubandhu's *Abhidharmakośa* eventually became the basis for all Buddhist studies in China (Ganguly, *et al* 1992: 19; Vassiliev 1937: 1013). The Asanga's *Māhayāna-Samparigraha* (Acceptance of the Great Vehicle), annotated by Vasubandhu, was translated into Chinese by Buddhaśānta (531 CE), Paramartha (563 CE), and lately by Huan Tsang (648-49 CE). Huan Tsang also translated Vijñāpti-mātrata-Siddhi, the Vasubandhu's 'Thirty Stanzas on Mental Happiness Only' into Chinese (Ch'en 1973: 385). The Fa-Hien or Hosso School, the Ch'an School and the Wei-Shi or Consciousness Only School in China was developed under the influence of Huan Tsang's translations of Yogācāra School (Jan Yun-Hua 1966: 138; Laurence 2002: 183). The Japanese Zen meditation practices are the direct heir of the Yogācāra school of Asanga and Vasubandhu. The Japanese priest Dōshō (687-700 CE) studied under Huan Tsang for ten years, and became a specialist of the Yogācāra practices (Nakamura 1999: 113; Takakusu 1998: 85).

***Wu-k'ong* was possibly the last recorded Chinese pilgrim to Gandhāra during T'ang Period. He was a layman when he left China. He was converted to Buddhism, at Gandhāra, possibly at Uḍḍiyana, and studied Buddhism for several years in Kaśmir (Bagchi 1981: 101).**

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[1] **He translated *Abhidharmakośa*, the *Madhyātavibhāgaśāstra*, the *Mahāyānasamgrahavyākhyā*, the *Vimśatikā* and the *Trimśikā* by Vasubandhu; the *Mahāyāna-samgraha-śāstra* and the *Yogācāra-bhūmi-śāstra* of Asanga, and Dharmapāla's commentary on Vasubandhu's *Trimśika*.**

CHAPTER 4

GANDHĀRAN MONASTERIES: CURRICULUM AND TEACHING METHODOLOGY

4.1 The Education System as Gleaned from Gandhāran Scriptures

The monasteries played a fundamental role in the development of Buddhist education system in Gandhāra. The system was focussed on the education and training of the monks. Nagasena Trenckner's *Milindapañha* mentions that solitude is good for monks, but they should also live in the monasteries to make them accessible to the common people (Kelly 2005; Sen 1999:82).

Gandhāran monasteries have been studied extensively for their architectural designs; however, their role as the educational institutes still needs the attention of the scholarly world. Futhermore, the Buddhist monasticism has been studied in respect to the philosophical and doctrinal points of view, the social and educational role of Gandhara monasteries has largely been overlooked (Stearns 1994:511).

The present researcher proposes here three-fold purpose of the Buddhist education system that is to:

1) **Prepare a highly educated class of monks within the Buddhist monasteries, through strict institutional rules and the behaviour code. The monks were to become teachers and spiritual leaders of the nation; their role in promoting literacy and culture throughout Asia in the first few centuries of the Chrisitan Era cannot be denied.**

2) **Educate common masses on the moral and ethical virtues to help them release from their existing state of sufferings and social chaos. The *Jātaka* stories and the Gandhāra relief provide literary and archaeological evidence for this form of education.**

3) Educate the rulers and the kings to promote the sense of duty towards their countrymen, mainly through lore.

The Gandhāra manuscripts and the foreign accounts refer to the high intellectual development and scholarship of the Gandhara monasteries. Huan Tsang mentioned that the people of Gandhāra were fond of practical arts, and the Uḍḍiyāna were fond of learning. People of Kaśmir admired learning and the learning of the people of Sind was superfluous (Sukla 1980:71-72). The Gandhāran monasteries evolved culture, art, traditions and the folklore. The Buddhist monasteries also provided access to education to the outcastes (Singh 2009:239).They monasteries promoted cheritable causes, building

libraries, hospitals, schools and universities. The scholars have variously attributed the rise of temple-colleges and the organized public educational institutes in the Indian Subcontinent to the influence of the Buddhism (Cohen 1995:22; Stearns 1994:512; Valeryevna 2009:301).

The Buddhists used teaching methodologies in accord with learning requirements of the students. They turned monasteries into the educational academies by observing strict discipline, the democratic principles, meditational practices, congregational life, and also the notion of preserving and promoting natural environment. This objective was achieved by constructing monasteries close to water sources, choosing meditation caves beside water falls, planting trees around and using natural building materials such as stone, wood and earth.

4.2 The Curriculum of Gandhāran Monasteries

A careful analysis of the Buddhist *śāstras* provides clues to the courses of studies, pedagogies, teaching and learning materials, and the daily routine of the monks. The following section provides a bird eye view of the curricula taught at Gandhāran monasteries.

4.2.1 The Buddhist Śāstras: ***Śāstras*** **were the technical, doctrinal and philosophical treatises composed by the Buddhist scholars that provided theories and codification of rules with clarity and precision. They were the product of highly sophisticated intellectual practices, systematically written in a standard format. A majority of them were encyclopaedic in nature, concerning several branches of science, art and philosophy. The introduction of *śāstras* contained: (1) a statement of the reason why they were written (rational); (2) a statement of the subject matter of the treatise; and (3) a statement of the relation between the treatise and the subject matter (Griffiths 1994:30).**

In *Prajnapati-śāstra*, found among the Gilgit manuscripts and *DharmaSanskritanda*, each section began with an introductory index verse (*uddāna*) that gave the topic of each chapter, detailing the specific topic to be discussed. The *sūtra* was intended to communicate briefly in metrical aphormism (*kānka*) teaching of the *śāstra*. The Abhidharma Buddhism relied on commentaries on Buddha's sermons. Numerous commentaries were written to *śāstras* to explain the subject matter in two ways, 1) to reaffirm or clarify the verses and 2) to interpret and draw the Buddhist meanings out of the text (Leningard 1932:8).

4.2.2 The Courses of Study: **The contemporary literature on the courses of studies in Gandhāra monasteries is at odd. Nonetheless the Buddhist *śāstra* and the palaeographic evidence provide clues that the monks were instructed in philosophy, medicines, astronomy, dialectics, lore and the art of poetics in addition to the Buddhist philosophy in the Māhayāna monasteries.**

The *Vedic* sources describe the early childhood education that is now considered as 'innovative' or 'modern' (Miles 2010). The 'art of bringing up', handling and playing with children was listed among the sixty four recognized skills of the Vedic education system. *Boddhissattvas* taught the doctrine of patience to young boys even if they misbehaved. Some*Jātaka* discuss childrens' toys, some of which have been found in the archaeological contexts in Gandhāra. The Buddhist *sūtras* mention *dvādaśanga pratityasamutpāda*, the twelve *nidanas*, or ways of learning, among which the earliest is that of an infant, who learns through touch or contact (Soothill & Lewis 2004:43). The Sage Nagasena instanced play motivation in the learning process, suggesting the observational knowledge of childhood, and its learning activities (*Khantivādi Jātaka*. IV. 313, Cowell 2002:26. Vol. III). *Buddhacarita.II.21 & 22* refers to toys of Gautama as a child, including little golden carts with deer harnessed in them, little elephants, deer and horses, and chariots yoked with little oxen and dolls. He elaborates that children need various kinds of sensory pleasures, suitable to their age (Aśvaghoṣa & Hamilton 2004:24).

I-Ching provided details of secular and religious education in Indiaand described a number of Buddhist and non-Buddhist children's primers, with chapters/sections ranging from nine to eighteen. The Buddhist Primer was called as *Siddham-chan* the prefix *siddham denoting* 'Praise to the Omniscent [the Buddha] or 'Perfection has been attained by the Buddha'. The non-Buddhist primer was called as *Siddham* or *Siddir-astu*, the term *Siddhu-astu* meaning 'may there be success'. According to the author of Mahabhaśya the word *siddham* was used as prefix because it was considered as auspicious (*mangala*), conducive to the success of the *śāstra*, that it would convey its meanings and will be accepted as a source of right knowledge by the students (Bhāndārkar 1984:346). Some Chinese accounts held that *Siddham* denote 'the alphabets'. Al-Bīrūnī also mentioned that most common alphabets in India were the *Siddha-mātrika*, believed to be originating in Kaśmir. According to Huan Tsang after mastering *Siddham*, the children were introduced with 'Great Śāstras of the Five Sciences', i.e., grammar at the head of 'Science of Sounds'; the 'Science of Arts and Craft' the 'Science of Healing' along with its various branches; the 'Science of

Reasoning' and 'Inner Sciences or Tripitake' One had to show himself proficient in 'Five Groups of Learning'[1] before the Head Monk while entering into a monastery as a monk (Watters 1904:160).

The poetry and the military treatises of the *Vedic* Period were excluded from the Pre-Māhayāna Buddhist monasteries. On other hand, the *śāstras* and the travel accounts of the Chinese pilgrims left sufficient clues for us to believe that the Māhayāna Monasteries included several Vedic courses of study in their curriculum. Wallace (2001:43) is of the opinion that the Māhayāna Buddhism considered theological knowledge and technical scientific learning (i.e., the knowledge of medicines, mathematics, artisanship, and weaponry) complementary to each other. The *Buddhacarita II.24 & 35* narrated that Siddharta learned all sciences soon after his first initiation; the mastery of which generally required several years. Some Māhayāna texts assert that *boddhissattvas* were encouraged to gain proficiency in all kinds of knowledge to attain the six perfections. Dharmapada in Gandhāri, found from Khotan in 1892 and 1897, mentioned the subjects like grammar, music, astronomy and the science of poetics (Aśvaghoṣa & Edward Hamilton 2004:24; Stearns & William 2001:44).

The linguistic and logic were primary to the courses of study. *Māhayānasūtrālamkāra* of the *Prajna* texts explained that linguistics and logic helped one to be proficient in debate, the medicines, the creative arts and similar disciplines (Wallace 2001:44). The archaeological evidence supports the literary sources. The room no. 12 in court J of Dharmarājika Stupa yielded a very fragmentary Brāhmī inscription (5th *c.* CE), with only legible words *Mahagan* and *Hetuvadin*, possibly referring to a group of monks specializing Páńini's Hetuvidya or logic (Dar 1998:203).

The *Alamkāra Śutra Kavya* has been mentioned as a branch of science in *Ṛgveda* and Páńini Ashtadiyāy. However, its earliest evidence is found from Turfan manuscripts, ascribed to Aśvaghoṣa'. A *kavi* was to master the sciences, the literature on war craft and the politics. He must had made his own textbooks on prosody and poetics, had already introduced new metres and a rich variety of speech. It was important for him to describe his ideas into few words (Winternitz and Subhadra 2003:4).

4.2.3 The teaching-learning discourses: **The strict discipline in teaching-learning discourses was a Gandhāra legacy. It was considered as an outward sign of self control. The students were not allowed to speak or cough during the lecture (Reagon 2005:181).**

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[1] astronomy, arithmetics, medicines, exorcism and inner sciences

Kautilya Arthaśāstra refers to self control as the basis of learning and knowledge. The treatise maintained that discipline comes due to strict obedience to the teacher, desire and ability to learn, to retain what is learnt, reflecting on it, and to make inferences (Rangarajan 1992:142). Buddhacarita.XVIII.6 maintians that discipline removes all dangers of the evil spheres of existence (Aśvaghoṣa & Hamilton 2004:30).

The early and later Gandhāra manuscripts lay emphasis on a self controlled and disciplined preceptor. The Māhāsañghika *Vināya* lays great emphasis on maintaining discipline in the monasteries. Fa Hien and Song Yun both referred to the highest discipline in dining halls of the monasteries (Beal 1884: xxvi & lvi). The Māhayāna Sūtrālamkāra.XVII.10 talks about the disciplined, self-controlled, skillful in comprehension and speech, and the compassionate learners (Wayman 1997:207).

(i) The teacher-student relationship: **The teacher was called as an *acharya* in *Upaniśads*; meaning 'behavior', referring to someone whose behavior manifests one's understanding and knowledge. Students lived with the teacher and had a chance to observe his behavior in daily life (Singh 2002:1058). In Buddhist monasteries the teacher-student relationship was called as *nissaya*, i.e., dependence on a preceptor. According to Māhāsañghika *Vināya*, every monk had a preceptor after first five years of ordination. The teacher taught *Sutta Pitaka* and *Vināya* to the student (Joshi 1967:122; Walser 2005:129).**

The Aśoken Edicts highlight the importance of *gurūnamapachi*, i.e., reverence to teacher. Teachers were served by students in five ways (*antavāsina*):1) **by rising (from seats in salutation-*utthānena*),** 2) **by waiting upon them (*apattānena*),** 3) **by eagerness to learn (*sussūsāya*),** 4) **by personal service (*parichariyāya*), and** 5) **by attention when receiving their teaching (*sakkacheham sippapatigga henana*). Mookerji (1955:152) asserts that the concept of high reverence to teacher was already prevailing in the Pre-Aśoken society, only to be further substantiated by the Aśoken Edicts.**

The *Jātaka* and the scriptures put high value to reverence to a teacher. It is narrated that when Buddha talked, no one moved, neither coughednor sneezed. The teacher sat on a high seat and a student on a lower seat even if the student was a king (*Cullaka-Sethi-Jātaka, Chavaka Jātaka*.I. 309, Cowell 2002: 18). The Jātakamala describes that one should sit on a lower seat than a teacher, and listen eagerly to his discourses. *Sūrangama Sūtra* maintains that when the disciples did not understand the Buddha's point, they brought their palms together and waited patiently for the Buddha's further instructions. They even sometimes rose from their seats and knelt before him when

asking a question (Ching *n.d.*:48; Wayman 1997:208). The *Jātaka* narrated that the seniority was of high respect in the Buddhist monasteries (Tittira *Jātaka*.I.37.).

(ii) Compassion of a teacher: **The Buddha showed complete and unending compassion to his students. The *Sūrangama Sūtra* reveals that the Buddha held out his hand and touched the Ananda's head to help him achieve the *Anutpattika-dharma-ksānti,* i.e., the 'Patient Endurance of the Uncreate'. Furthermore, when His disciples did not understand him and he was filled with compassion for them, his voice became as steady as an ocean tide (Ching *n.d.*: 43 & 57).**

4.2.4 The timings and the time management: **The Travel accounts of the Chinese pilgrims reveal the rigorous day and night time table of the Buddhist monasteries. There were *trisandhya* or three time watches for day and night, *pūrvāhna* or forenoon, *madhyāhna* or noon, and *aparāhna* or afternoon for day time; *prathama-yāma* or first watch, *madhyama-yāma* or second watch, and *paścima- yāma* or last watch for night time. The first watch of the night was meant for meditation and discussion, second for rest and the third for meditation. I-Ching refers to the use of time wheels in monasteries. It consisted of a circle with a stick in center. The shortest shadow of the stick reached at exact mid-day. Huan Tsang mentioned clepsydra or water clock, to measure the hours of day and night. The instrument was used by all monasteries in the Land of Five Indies[1]. The timetabling was also kept through ringing of bells at particular hours of the day (Lahiri 1995:57; Muller 1896:143).**

According to Māhāsañghika *Vināya* the monks were to be taught at morning, noon and evening. In the evening they were taught *Abhidharma* or *AbhiniVināya*. *Abhidharmakośa* referred to nine types of sūtras, i.e., the Sūtra, the *Gaya,* the *Vyākarana,* the *Gāthā,* the *Udāna,* the *Ittivrttaka,* the *Jātaka,* the *Vaipulya,* and the *Adhutadharmma.Vināya* referred to *Prātimoksa*. Huan Tsang mentioned that Bhadantayaśas, his preceptor in *Abhidharmakośa* in Kaśmir, taught *Abhidharmakośa* in forenoon, *Nyāyānusāra* in afternoon, and *Hetuvidya* at night (Pushp 2001:35; Walser 2005:129).

(i) The learning process: **Pivotal to the philosophy of education since the *Vedic* period, he Kautilya Arthaśāstra mentions that the process of learning includes the qualities of intellect, desire and ability to learn, listening, grasping the ideas, retaining the information, rejecting the false views and adhering to the true ones (i.e., critical analysis and reasoning), and reflecting on it (Rangarajan 1992:142). The process of learning was**

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[1]Referring to all parts of India, including Gandhara

closely tied with the moral precepts, and the meaningful learning was thought to be impossible without respecting the basic ethical precepts. *Brhadāranyaka Upaniśad.V.2* describe three "*da,s*", initially written as , *da,-da,* and *da,* and explained as *damataya* (self control), *datta* (generosity), and *daya dhnam* (sympathy) an essence of all learning (Winternitz, Winternitz & Subhadra 2003:241).

Māhāsañghika *Vināya* maintained that education was a benefit for monkhood and learning was a right, as well as an obligation for a monk. Learning constituted study (*svādhyāya*), question-answer sessions, and *ācāram*, i.e., good conduct (Walser 2005:128). Manjuśri is considered as a god of learning or *prajna*. He confers intelligence and memory upon his disciples. A number of stelae and reliefs discovered at Mohammad Nari, Sahr-i-Bahlol, Mardan (2nd *c.* CE) represent *boddhissattva* Manjuśri with a book or manuscripts in his hand. He carries a sword in his right hand and *prajna* text in his left hand. The sword symbolizes cleaving the clouds of ignorance (Khettry 2001:27).

4.3 The Teaching Methodologies

The teaching methodologies included oral transmission, question-answer techniques, critical analysis, parables, riddles and metaphors, and debate and logic.

4.3.1 The oral transmission: **The doctrines of Śakyamuni Buddha were not committed to writing by him, but were orally communicated to his disciples (Gour 1929:33-34). The Buddhist scripture start with *evammayā śrutam* (thus it was heard by me), revealing the importance of oral learning (*mukhapâthena*) in Buddhism. Mahâvamsa (5th *c.* CE) narrates that the Aśoke's son, Mahinda's when on his missionary journey to Ceylon (241-318 BCE), spent three years in learning the *Tipitaka* by heart from the mouth of the teacher. Vasubandhu (4th *c.* CE) also refers to the oral transmission of the religious text. Fa Hien (5th *c.* CE) found that *Vināya* was handed down orally from one patriarch to another in Gandhāra (Berkwitz 2009:2; Miller 1881; Scharfe 2002:24).**

The memorization was one of the prime skills of the Buddhist monks. The reputation of monastery among the laity rested on what kind of textsthe monks had memorized.The neglect in memorizing was considered equal to the decay of the religion. Extensive treatises on philosophy, medicines and grammar were transferred from one generation to another without aid of writing. I-Ching reported the method of transmission of the Vedas that had greatly enhanced memorization. The Buddhist *śāstras* speak of the strategies for memorizing lengthy treatises. It was instructed to be done loud or silently (King 1999:51; Miller 1900: xxviii; Rhys 1999:110-111). Walser (2005:129) describes the individual as well as the group memorization of monks in the Māhāsañghika

monasteries. The variation in accent was used to aid the memory since *Vedic* Period. Three accents, i.e., *udatta* (the rising accent), *anudatta* (the low pitched accent), *ansvarita* (the falling accent) were used for preservation of the *Ṛgveda*. The accent was also strictly followed by the Buddhist monks when reciting *sūtras* (Srivastava 2003:71). The Māhāsañghika *Vināya* describes teaching the young monks through *prāyayāna*, i.e., sentence by sentence. The monk was to say the syllable in rising tone, together in falling tone, together stopping.

The Buddhist canons extensively use the mnemonic to enhance memory. The ancient Buddhist scrolls from Gandhāra', recovered from Dharmagupta monasteries in Taxila and Hadda, written in Kharoṣthī script, dated back to 1st or 2nd *c.* CE provide an evidence that the text was used as mnemonics while teaching, or the lecture notes. The written text was possibly used as a kind of index to the memorized corpus. Walser (2005:127) provides an example of the avadana text in British library collection. It contains seven instances of an abbreviation formula such as *vistaresarvo* (i.e., recalled) in full, or *vistare janidave siyadi* (the story) should be known (i.e., recalled in full). In *Vināyatexts.I.267* the rule was *Pāttimokkha* consisting of 227 Rules of the Order, to be recited monthly in each monastery. Buddhayaśas of *Jibin* was renowned for his memory to recite the *Vināya* of the Dharmaguptas (Berkwitz 2009:6). Anyhow the oral transmission is not equal to the rote memorization. It was a sound pedagogical system consisted of the structural, practical and ethical elements. It included four branches of knowledge, i.e., understanding the sense of the sacred text, understanding the ethical truth, ability to justify on interpretation grammatically and logically, and the power of the public exposition (Cowell 2002:283). The modern instructional strategies use similar techniques.

4.3.2 Question/answer techniques: **The question-answer strategy is manifested by almost all Māhayāna*Sūtras*. The *Lankavatara Sūtra* mentions four types of explanations, i.e., direct statement, questioning, discernment and setting aside. However, question-answer was the most important method of teaching and learning (Suzuki 1930:100). Dharmskanda includes a section entitled as "posing of question" (*panhapucchaka*) in which the topic is further analyzed through matrices (*mātikā*). *Samyutta Nikaya*.xii.35 teaches how to put a question in clear and concise words (Lanman 1922:167). At instances Buddha exclaimed that the question was not rightly put and then he rephrased the question. Buddha is said to have traced the illusions back to their source and put himself as far as possible in the mental position of a questioner. He accepted ideas of the questioner as a starting point of his own exposition. Sometimes he even adopted words**

of the questioner. Afterwards skillfully, he would put higher meanings to the words, and useethical examples from the daily life. Finally he would lead to conclusion called 'skillful means' or the dialectical skills. In *Prajnapti-śāstra* all topics are discussed in a question format with a brief explanation (Ching *n.d.*, 127; Willemen, Bart, & Collett, 1997:196; Wyne 2007: 99).

The teaching ethics maintained that the audience could raise question and the teacher was to answer the question; a rule originating from the *Upaniśads* and continuing in the Māhayāna monasteries (Qizhi 2004:62).

4.3.3 Teaching through individual differences: **The Buddha's sermons differed by time, audience and the circumstances. Nāgarjūna in his Middle Treatise describes in detail and devotes five verses, *viz*, 24V/11-24v/15 to the dangers of mismatching the teaching and the comprehension abilities of the hearers (Bocking 1995:87). According to *Lankavatara Sūtra* of Nāgarjūna, a good physician administers medicine according to the condition of his patient and the Buddha discoursed according to the mental capacity of the listener. He also used several tones of voice according to the occassion. His eight tones are proverbial in the Buddhist lore, i.e., beautiful, flexible, harmonious, respect-producing, non-effeminate (manly), unerring, deep and resonant (Soothhill, W.E. & Lewis, H. 2004:41; Suzuki 1930:168).**

4.3.4 Reasoning and critical analysis: **The term 'reason' is defined as a rational element of human intelligence distinguished from sensual or emotional element. It leads to freedom of thinking and action (Jinananada 2009:1). Reasoning and the critical analysis was not new to the Buddhist teachings. It comprised an integral part of the Pre-Buddhist education. The Kautilya Arthaśāstra enumerates the term *Anviksiki* referring to the science of testing the perceptual and scriptural knowledge by further scrutiny (Dasgupta 1922:277).The Buddha's life history reveals that his search for truth started with observable and common features of human experiences.Instruction is important to attain knowledge, but it should be corroborated by personal experience, suitable training and development of one's intellectual and moral powers. Buddha says, *"...one must not accept my Dharma from reverence, but first try it as gold is tried by fire"* (Narasu 1948: 25). The mere acceptance of doctrine on the authority of others does not lead to Enlightenment.**

Narasu (1948:37) mentions that Buddha described three miracles: the first being walking on waterand raising the dead; the second being thought reading, sooth saying and future telling; while the third included the intellectual and ethical power. He emphasized that the highest among the three kinds of miracles was employing one's intellectual and ethical powers. Furthermore the ethics should again be integrated with rational investigation of the human nature, social organization and the physical world[1]. Early Buddhist teachers instigated the spirit of inquiry and rational investigation through dialectical thinking and critical social analysis (Gautam 2009: 84; Hamilton 2000:55). According to *Kālāma Sūtra, Angūttara Nikāya*, the Buddha taught to Kālāma princes that they should not believe in a tradition due to its antiquity or its popularity, rather they should analyze it and verify it against its significance to the human beings. The *Madhyameka* philosophy puts high value to the critical investigation (Jinananda 2009:2; Mittal 2009:35; Vose 2010:553).

Nāgarjūna quotes the notion of 'knowing' or 'belief' with critical analysis and relates the mechanics of inference to belief in most scientific manner. According to Nāgarjūna Middle Treatise 24 a_{27} and 24b_3, belief (*pramana*) or knowing is of four types:(1) manifestations of the things (*pratyaksa*);(2) comparative knowledge (*anumāna*);(3) analogy (*upamāna*); and (4) the statements of the holy ones (*śabada*) (Bocking 1995:448). Manifestations of the things are of two types: belief in a manifest thing; and something known through a manifest one (the inferential knowledge).The inferential knowledgeis interpreted as having seen something before, one concludes something.For instance,a man who has seen fire and smoke before, if sees smoke he concludes the existence of fire on the presenceof smoke. There are three kinds of inferential knowledge, the fist kind isto see both the cause and effect, for instance, seeingfire and smoke together, or seeing the effect and concludesthe cause, for example, on seeing smoke concludes the existence of fire;the second kind to draw conclusion on seeing the remainder,in case one sees a grain of rice cooked, one gets to know that it was cooked in a pot; and lastly seeing things happening together, e.g., when one sees a person going from one place to another, one sees the person as well as his going. The *Jātaka* further elaborate the idea and teach that every piece of information should be tested and examined before its acceptance as a

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[1]*Kālāma Sūtta* advised to not to accept any moral code on the basis of following ten grounds 1) *anussava,* i.e., vedic authority, 2) *paramparae,* i.e. tradition , 3) *itikirae,* i.e., report, 4) *pittakasampadae,* i.e., textual authority, 5) *samano garu,* i.e., apparent agreeability of the view , 6) *takkahetu,* i.e., authority of the holder of the view, 7) *nayahetu,* i.e., apparent logicality of the view, 8) *aakaaraparivitakka,* i.e., the fact that the view is an accepted stand point, 9) *bhabbaruupataa,* i.e., inadequate reflection on reason, and 10) the fact that the view agrees with one's own view (Gautam 2009:83).

truth. One should not listen to the idle gossip and jump on conclusions hastily (Daddhabha *Jātaka*. IV.322: Cowell Vol. III. 2002:49).

4.3.5 Teaching through parables and proverbs, riddles and metaphors: **Aristotle in the 3rd *c.* BCE, Lord Beacon and Lord John Russell in the 19th *c.* CE has variously attested to the significance of teaching through proverbs (Mieder 2004: 9). Parables constituted important pedagogical tools since the inception of Buddhism. Beal (1884: 25) states that they were mainly instrumental in diffusing knowledge of Buddhism throughout Asia.** Educatingpeople through proverbs was in vogue in Gandhāra since *Upaniśad* Period. They were an effective means of communication due to their strong didactic component and their deep effect on moral conscious of the people. *Saddharma Pundarika*[1],i.e., Lotus of the Great Law, commonly known as Lotus Sūtra became popular in China due to its similes and parables (Watson 1997v:xxi; personal visits to various Buddhist monasteries in China, including Fa Hai Temple, Beijing, Ming Dynasty (15th CE); see Pl. 2b).The riddle-questions and riddle games were very common among the common masses. Sometimes they even formed part of a ritual. The Buddhist *sūtras* were written in simile and metaphor to help memorize, emphasize and to persuade (Waymen 1997:211). Gefrosky (1999:40) speaks of the riddles transfering to China through the Silk Route through the oral traditions.

4.3.6 Dialogue and debate as a means of imparting true education: **Socrates (c. 470-399 BCE) is generally described as the 'father' of the method of enquiry called as 'dialectics' or 'dialogue' or logical discussion in education (Spring 1994: 56). The shaping of one's character, through reasoning was important to all ancient education systems. The critical reasoning was to compel people out of their apathy, and become compassionate towards others. The teacher was to ask questions leading to the discovery of the correct answer. The student was the thinking participant and the teacher encourages him to explain and justify his answer. The instruction was not a mean to provide the answers but to help the students find the results through observation and enquiry. The dialogue compelled the individual to play an active role in acquiring values and the ethics (Krishan, Patnaik & Sharma 1989; Perry 1990:56).**

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[1]*Saddharma Pundarika* or Lotus Sūtra of the Yogācāra school was first translated from Gandhāri Prakrit to the Chinese language at the beginning of the Christian era. Nonetheless, it became one of the fundamental scripture of Buddhism in China after it was translated by Dharmaraksha (end of 3rd and beginning of 4th *c.* CE).

The art of debate (*tarka*) as the means of valid knowledge (*pramana*) is known from *Upaniśads*. In the *Chhandog Upaniśad* and *Brhadāran Yoge* (8th-6th *c.* BCE) kings were presented as enthusiastic and active organizers of conferences and congresses, indicating several instances of learned disputations in which scholars of different classes and castes, such as, the Brāhmans, Kṣatriya and women, participated equally.Philosophical debating was considered a high art, where the king himself was the judge of competition (Bakhshi & Lipi 2000:111).

I-Ching places Māhayānists the highest in the class of dialectics and logicians. The school of dialectics/debates was greatly developed by Nāgarjūna. The *Prajna* texts follow a format of continuous dialogue between the Buddha and his disciples, as well as between gods, spirits and men. In his *Upayakarśalya-hrdaya Sūtra* (The Essence of the Skills in the Accomplishment of Action) he describes at length the rules of dialectics, *viz,* the perfect and the defected speech, the rules of perfect perception, inference and comparison, the analogues, the kinds of analogues, the kinds of examples that the disputant and the respondent should provide. The conclusions might be drawn by means of inference, comparison, scripture or perception. Nāgarjūna's manifests that the speech of a debate should be clear; neither redundant nor inadequate. It should be pertinent to the subject and occasion (Potter 2003:108). According to *Lankavatara Sūtra* of Nāgarjūna, *bodhi* is a higher power of reasoning. It consists of *pravicayabuddhi*, i.e., to search through, to examine thoroughly, and *pratishthāpika*, i.e., the intelligence that sets up all kinds of distinctions over a world of appearances, attaching the mind to them as real. It is a logical knowledge that regulates our daily lives. *Bodhissattvas* avoid one-sided views in order to attain enlightenment. The world of particulars is devoid of mind (*citta*), will (*manas*) and intelligence (*manovijnana*), but human beings posses these powers of intellect and reasoning. In Gandhāra relief *vitarka mudra* symbolizes the action of argument or discussion. It is also called as the mudra of explanation (*vyākhyāna mudra*) (Frédéric *n.d.*:41; Prebish 1994:70; Suzuki 1930:168).

The art of debate was not only used in religio-philosophical discourses, but also in secular settings. The *Caraka Samhita* emphasizes the debate and reasoning (*yukti*) as a valid means of knowledge (*pramāna*), and an experimental approach to medical treatment and diagnosis. Logic was incumbent to a *vaidya* (the local doctors), not only in diagnosing disease but also carrying on debates in the highly competitive environment. The debate was to be carried on the basis of *tarka, vāda, jalpa* and *vitandā. Tarka* was process of reasoning carried on in one's mind before one can come to any right conclusion, a subjective weighing of different alternatives on the occasion of a doubt

before a conclusive affirmation or denial. Debates were of three kinds, *viz, vāda, jalpa* and *vitanda. Vāda* means a discussion for the ascertainment of truth. *Jalpa* was a dispute in which the main objective was to overthrow the opponent's rightly or wrongly and *vitanda* was a dispute in which attempts were made to discover the faults of the opponent's thesis without any attempt to offer any other alternative (Kapoor 2003:436).

The art of disputation eventually became a powerful tool of the Buddhist monasteries. Some of the greatest writers on disputation and specialists in *vada* were Buddhist monks. The sect who won the competition was at the top, it meant more power, prestige and influence on the society. The Chinese and Tibetan accounts refer to the renowned monks who had earned enormous amount of money from winning the debate competitions. The rulers patronized such debates and generously rewarded the winning monastery.The disputation on philosophical and religious topics was brought to China with Indian Buddhist monks possibly in late 4th *c.* CE. The method of debate was also preserved by the Tibetan monks, following the Mādhyamika system of Nāgārjūna and his followers (Garrett 1997:199; King 1999:44).

4.3.7 The use of signs, symbols and non-verbal communication: **The educational theories recommend non-verbal communication in the classrooms as some expressions cannot be made explicit through words. The signs and symbols help to continue instruction without interruption and save the instructional time. Historically, the Buddhist monasteries used an effective system of signs, symbols and other forms of the non-verbal communication. The Buddhist *sūtras* refer to two kinds of replies to a student, i.e., one by words and other by signs. The Gandhāra reliefs manifest non-verbal communication through mudra (Filligenzi 2005:110; Soothill & Lewis 2004:29).**

The Buddhist *sūtras* mention several postures and gestures used as the effective didactic means. The s*ūtras* speak of the Buddha's raising one finger in a didactic manner, and also raising his right hand as a symbol of benediction to the devotees. *Surangama.47* narrates another instance where the Buddha held out his hand and straightened his fingers to give further instruction. In another instance, he towered his arm with his fingers pointing downwards and asked disciples to explain the position (Ching. *n.d.* 49). The Buddha's disciples keenly observed his body gestures in order to understand his non-verbal message.

***Lankavatara Sūtra* asserts that the words are not necessary to communicate all ideas. In some cases the Buddha taught through gaze, by contracting of the facial muscles, by raising eye brows, by frowning or smiling, by clearing the throat, by the twinkling of an**

eye, by merely thinking, or by motion of some kind. Articulate speech was not the absolute necessity of human communication. In the words of Samantabhadra mere gazing was enough for teaching the rules of the highest enlightenment to disciples. The *sūtra* asserts that the business of life was carried out most successfully by bees or ants that never used words. If a thought occured in one's mind it might not be communicated properly by words, but if there was a harmony between the two, a mere touch might create reverbations, transforming thought to the other. The *sūtra* warns against clinging only to words while teaching, falling into the habit of superficially taking mere words for real meaning and regarding the words as expressing every thing. Wrong adherence to the power of words might create an attachment to musical or literary productions which were not always spiritually enhancing. The words were only indicative and suggestive of where to look for the real meaning (*artha*) (Suzuki 1930:10).

The bells and drum beats were a symbol to summon monks for morning rise, meals and for important meetings (see Pl. 3a & b). Later the bells were commonly used by the schools and colleges. The Chinese translations of the Aśvaghoṣa's biographyreveal that a *ghanta* (bell) was a previledge given to the religion which had obtained preponderance (Lahiri 1995:57).The Chinese *Vināya* called as *Chanyuan qinggui*, i.e., 'Rules of Purity for Chan Monastery', compiled by monk *Changlu Zong ze,* in 1103 CE, is largely based on Four Part *Vināya*aya. It relates several signalling instruments in the Chinese monasteries. The morning signals were of two types, 'opening of small quietness', one time ring at very early hour of the morning when only some monks were to be awakened; and 'opening of big quietness' when all monks were to be awakened by three sequences of the bell. The *sanxia* (three sequences) were used for several purposes. The three drum sequence meant that abbot was approaching in a ceremony. The two striking of the bell signified the meal time. After wooden fish[1] (*muyu*) was struck, no monk was allowed to enter the dinning hall. The striking of stand and hammer in Sangha Hall was used to pacify (*jing*) the assembly (see Pl. 4a). The teachers snapped their fingers to silence the assembly when all monks spoke without order. Enning, a Japanese monk to China reported that when the monks chanted hymns, the head monk, presiding over the ceremony, struck a stone triangle as a symbol for pause in chanting. Presently, the Buddhist monasteries in China use a number of non-verbal signs and symbols in lecture halls, dining halls and during chanting ceremonies. For instance, they

[1] A long piece of wood is carved in shape of a fish. According to Chixiu Baizhang qinggui fish never closes its eye, therefore it was adopted as a signaling instrument for unending vigilance and rigor (Yifa 2002: 296).

strike a wooden block to signal monks to change the page of the book while chanting (Sarao 2002:7; personal visit, see Pl. 4b).

4.4 The Writing Culture of the Gandhāran Monasteries

Writing was known in Gandhāra since 8th *c.* BCE, but it was not a preferred medium of religious learning till the first few centuries of the Christian era. Páńini Ashtadiyāyi uses words for script, writer and art of writing. The art of writing has variously been mentioned at *Vedic*, *Upaniśad* and *Brāhmana*Periods. The words like pen, book, school writing, articles, writer, alphabetical letters and writing materials such as wooden and bamboo pieces, leaves, wooden canvas have appeared in *Jātaka* (Shri Nagrajj 2003:236). The archaeological evidence supports the literary evidence. The Aramaic inscription, in Brahma script found from Bhai Khan, near Peshawar (7-8th *c.* BCE) provides the earliest evidence of writing in Gandhāra (Dani 1995). The Brahma script according to Brāhmans was originated by god Brahma himself. G. Buhler (1898) maintained that the origin of Brahma script goes back to a Semitic origin. The oldest North Semitic characters were found in Phoenician inscriptions and on the stone of Mesa about 890 BCE (Rhy 1999:114). Winternitz (1997:31-32) and Gour (1929:47) mentioned that perhaps by about 800 BCE, it was through merchants that this script was introduced in India.

There are mentions that the Buddhists use of writing at the time of formation of Buddhist Canons at about 240 BCE (Winternitz 1977:32). *Dipavamsa* records the writing down of the Buddhist scriptures in Ceylon towards the end of the 1st *c.* CE (Miller 1900: xxii). *Kharoṣṭhī* was introduced in 500 BCE. One of the earliest known Kharoṣṭhī inscription, called as Shahpur Inscription was found on copper plate near Dahrmarajika Stupa in Taxila. The room no. 12 in court J of Dharmarājika Stupa has yielded a very fragmentary Brāhmī inscription (5th *c.* CE), with only legible words "*Mahagana*" and "*Hetuvadin*". Some folios of books, a few inscribed stones and numerous other inscriptions on silver, gold and copper plates, rocks and stone, stucco, pottery and metallic wares have been found from excavations at Taxila. The inscribed finger rings and inscribed seals have been also found from Sirkap (Dar 1984:217).

4.4.1 The Gandhāra manuscript culture: **A number of Sarvastivadan manuscripts belonging to the Kuśan period were recovered along Silk route from Gilgit, Šorčuq, Toyoq, Qizil, Sāngim, Xočo, Murtuq on the northern route, and Damdān-Uluq, Khādalik, Niya, Endere, and Dunhuang on the southern route (Walser 2005). Mc. Govern (2000:18) mentions that the original headquarters of the Sarvastivadan texts,**

written in Gandhari Prakrit, seem to have been Gandhāra and Kaśmir. Its rendering in *Sanskrit* was adopted later on. The phonetic rendering of some of the earlier Chinese translations show that the seven Abhidharma of Sarvastivadan works, including *Vibhasa, Mahavibhasa* (2nd *c.* CE) and their commentaries were originally translated from the Gandhari Prakrit (Berkwitz, Julian & Claudia Brown 2009: 2).

The earliest collection of the Buddhist manuscripts, published in *Ancient Buddhist Scrolls from Gandhāra* in Kharoṣthī script (1st or 2nd *c.* CE), revealed that copying, storage and disposal of manuscripts was an organized activity in the Buddhist monasteries. Nāgarjūna initiated the strict rules for the reproduction of Mahāyāna *sūtras*. The Mahāyāna s*ūtras* were revered as the *Buddhavacana*[1]. The process of recopying and burying the old text became an organized activity, and gradually the cult was changed into a ritual. Nāgarjūna discussed in *Ratnavāli* that a king should donate for the Buddhist scriptures and means for reproduction of scriptures. He also asked the laypersons to donate to the monks in the form of books. The Mūlasarvāstivāda *Vināya* stated that after a monk's death a part of the money from his estate should be used for copying Buddhavacana text. The Mahāyāna manuscripts culture was fully developed by the 5th *c.* CE. Nonetheless, a majority of the original texts, were written on thin birch bark leaves, were lost. A majority of the manuscript were traced through their references in the later works or their translations in Chinese, Tibetan and other Far Eastern languages (Walser & Walsh 2008:53, 138).

The Buddhist canonical books were written upon birch bark, metallic plates, stone slabs and clay moulds in the first centuries of the Christian Era. Fa Hien while translating Māhāsañghika *Vināya* provides several examples of writing, book keeping, carvering, pen and paper (Ghosh 1990:360; Walser 2005:120).

4.4.2 The pens and the inkpots: **Páńini Ashtadiyāyi used the term *lipi* for ink. The evolution of some Brāhmī and Kharoṣthīletters in many cases shows the use of ink and pen. The *Sanskrit* terms *mata* or its variant *meta* for ink refer to the powdering and mixing of the color giving objects. The words for the containers, i.e., *pātra, bhānda, kūpikā,* etc. were suffixed to those for ink to signify ink pots. The word *varnikā* refers to the wooden pens. The *vināya* speaks of the wooden boards, i.e., *phalaka*. Some Gandhāra relief portray the child Bodhisattva and his classmates with writing boards and ink pots. The *Kāvyamimamsa* mentions *loha-kantaka,* an iron needle for**

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[1] i.e., the words of the Buddha

writing on *tala-dala*. The metallic ink pots were introduced to India by the Greeks. The Sakas had imitated them in terracotta (Ghosh 1990:359).

4.4.3 The archaeological evidence: **The copper inkpot with serpentine ladles and stopper that was originally attached by a chain was recovered from Sirkap, Taxila. The excavator claimed that the deposits of ink were traceable at the bottom of the ink pot (Marshall 1927-28:65; 1930:116; see Pls. 5b, 6a & b). Hargreaves (1914a: 32) describes the recovery of an earthen ware *dowat* (ink pots) like vessel (acc. No. 22) from Dharmarājika stupa excavations. The copper ink pen with nib split, similar to those of the reed pens, were also recovered from the same stratum of Sirkap. Stein found wooden pen with horn burnishers (3rd-4th *c.* CE), and glue brush (400-1000CE) from Dunhuang caves (Whitefield 2004).**

The Gandhāra manuscripts reveal the use of highly durable ink, still preserving its colours. Some examples of the permanent ink were still found in the province of Punjab till 17-18th *c.* CE (Śrivastava 1983:71). The lac and juice of *lodh* was used to prepare the ink. It was not washed in any circumstance[1] (Encyclopedia of Britannica 1823:260).

4.5 Monasticism and the Meditation

Meditation was the most important training in the Buddhism. It was to bring wisdom, joy and peace of mind. The Buddha proclaimed that mind was the main factor in all happenings (Johnston 2000). The Buddhist texts describe a variety of meditative techniques (*samāpathis)* that enlarge the mind's cognition. The most important of these were centered on six branches of super-knowledge (*abhijñas*), five of which pertain to this world (Jaini 2001:173; Suzuki 2008:79). The major Buddhist treatises attributed considerable content to the practices and philosophy of meditation. The scheme of meditation included physical discipline, mental discipline, perfection of knowledge, and finally the attainment of the absolute nature or *buddhahood/boddhissatvahood*. However, this absolute nature could only be attained after freeing oneself from evil emotions, passions through preliminary meditative practices and gaining knowledge of the worldly sciences.

The meditation poses of Buddha are central to Gandhāra relief. The Mara's defeat, the last and definitive success of Buddha over worldly and heavenly elements shows Buddha in meditation pose, revealing his highest power of mind, and the power of concentration (Brancaccio 1991). The *Jātaka* put high value to the meditation (see Table no. 4). The

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[1] The French Jews used *tusche*- a typical Indian ink in the Medieval Period. It would be an interesting study to probe for the source of this 'Indian ink' (Carvalho 2007: 47).

Gandhāra manuscripts, *Jātaka*, and the Gandhāran relief highly preached for the significance of the meditative practices. *Buddhacarita XXIII. 53* called Buddha 'the Master of Yoge'. Over forty meditative practices of the *Yogacarins* were enumerated, but there were more (Srivastave 2003:213). *Sandhi-nimocana Sūtra* (the Elucidation of the Intention) contains the earliest presentation of the essentials of the *Yogācāra* practices. *Samadhiraja Sūtra*[1] of Gilgit manuscripts maintained that meditating in the lonely places is of highest merit (Aśvaghoṣa & Hamilton 2004: 83; Koewn 2003: 251).

The following sub-section enumerates the educational, health, social and environmental benefits of the meditation practices.

The *Sanskrit* terms for Buddhist meditation are *Dhyan*[2], *samādhi, śamatha, vipaśyanā, samāpathi, yoge* and *bhāvana*. *Samadhi* meaning 'bringing or putting together' refers to a state of mental concentration or mindfulness[3]. Concentration was the main aim of meditation. It is also one of the basic themes of modern educational theories. Concentration involves the ability to keep one's attention fixed on an object, thus overcoming the usual habit of mind to flutter from subject to subject (Burns 1994: 2). The Buddhist meditation focuses on the physical and environmental factors that are conducive for concentration, e.g. seclusion from noise and pollution. The *Prajna* texts teach the rules of mental quiescence leading to full concentration. The sūtra also enumerates different objects of concentration. The mind is directed towards object through memory and attention. When one attains the feelings of body and mental ease, one has a state of mental tranquility (*śamatha*). It enables one to investigate the object, examine its nature, reflect on it, pursue his analysis, experience satisfaction in the process, distinguish the particularities, and make his thought constructions; referred as

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[1]*Samadhiraja Sūtra* (or *Candrapradipa Sūtra*) written in correct Páńinian *Sanskrit* is dated to 6th -7th *c.* CE. However, its original versions were in existence on 2nd *c.* CE. It was translated into Chinese as early as 40 CE. It must have taken a *c.* or so to earn a widespread respectable status to be translated into a foreign language, making it much earlier than the 1st *c.* CE. Chapter VI entitled as *Samādhi-parivarta* deals with three essential exercises (i.e., compassionate mind, acquisition of merits, and worship of *dharmakāya*) for perfecting oneself in the highest meditation. Chapter VII entitled as *Trikṣāntryavatāra* deals with meditation practices, how to develop concentration of thoughts, acquiring the five *abhijnā* and extend the thought beyond limitation.

[2]*Dhyan* was translated in early Chinese as *Ch'an* (*-na*) and by the Japanese as Zen (Jhāna-to think closely).

[3] Milindapañha divides the practice of mindfulness into four groups, i.e., watchfulness of the body, of feelings, mind, phenomena, in all their aspects and bearings. The minute observation of what is going on in one's body and mind and also in things around him, is the way to attain *samadhi* (Gregory 1986:17).

transcendental analysis (*vipaśyana*) in *Abhisamayālamkara* of Nāgarjūna (Leningard 1932:17).

Buddhist meditation was characterized by the periods of sitting meditation alternated by the walking meditation, in which one was to note the exact movement of the body in great detail (Fischer & Taurus 1997). I-Ching referred to the walking meditation of the priests and the laymen. He mentioned the cloisters (*konkrama*) where the World Honor once walked (Muller 1896: 114).The modern scientific enquiries proved that walking and *asanas* are of special phsycho-physiological significance. It not only produces flexibility and strength to the body, but also increases the social interactions and the observation power. The *asanas* provide a variety of effects, e.g., stimulating, calming, energizing, building stamina and concentration. The Lotus *Posture* was of special significance in learning and concentration. The position produced a restfull relaxation, which enhanced the concentration (Iknoian 1995: 5; Mira & Shyan 1990: 12). Furthermore, meditation was an instrument to fight against the unwholesome mental states and initiating the wholesome mental states, i.e., the four sublime states, loving kindness (*metta*), compassion (*karuna*), sympathetic joy (*mudita*) and equanimity (*upekha*). These states refer to a mind free from harmful social emotions; self indulgence, hatred and anger (Ratankul 2009: 3).

Mahāyāna Buddhism popularized the meditation to the extent that it became part of everyday life of the Buddhists. A study of the modern Buddhist societies reveal that even today meditation is practiced in Śri Lanka, Thailand and Burma, and the youth still visit monasteries for meditation hours (Shaw 2006: 14).

4.5.1 The Mahāyāna meditation and Pre-Buddhist yoge: **The Mahāyāna meditation has close relation with Pre-Buddhist *Upaniśad* and *Samkhya Yoge* practices.The concept of the *yoge* perhaps goes back to Indus Valley Civilization, as instanced by a rare Harappan seal, showing a horned deity sitting in the cross legged (lotus) posture, dated to 3rd millennium BCE (Huntington 1985: 121; Warthington 1982: 9).**

We do not find *Tiyāga* (denunciation) in early *Vedas*. The *Upaniśad* philosophy (700-550 BCE) of *tyāga* was a revolt against the Brāhman priests. We find the earliest references to *Śramana tāpasa* (an ascetic practitioner) in *Brhadāranyaka Upaniśad. Tyāga* was key to unlock the door of Supreme Reality, i.e., 'Brāhman or Atman' (Dutt 1998: 37). The *Śramana* were the first builders of the *Aśram* which later on became a hub of intellectual and spiritual quest of innumerable students (Kaelber 2007: 383). At Alexander's time the ascetic practices were at their peak in Taxila. Strabo, Pliny and Arrian recorded

Alexander's interest in the ascetic wisdom and their practices (Vassiliades 2000: 149). The *Jātaka* speak of a large number of graduates of the University Center of Taxila eventually turning into the ascetics (see Table no. 4 & 5).

The Buddhist text like *Majjhima Nikaya*.I-164 ff, Aśvaghoṣa in *Buddhacarita*.XII.17ff and *Saundarananda*.*XV-XVII* mention the Buddha's quest for truth, where he learned the meditation[1] from the *Upaniśad* teachers and the *Bhagavat* ascetics, *Ālāra Kālāma* and *Uddaka Pāmaputta*. Later he improved the *Bhagavat* practices by introducing the Mid-way. The Buddhist *sarvam-dukham, sarvam anityam* (all is painfull, all is suffering) was adopted from *Samkhya, yoge* and *Vedanta* philosophy (Eliades, Willard & David 2009: 163; Jaini 2001: 19).

***AbhyasaVairagaya* or bi-polarity[2] of the *yogic* path is same in *Upaniśad,* Patanjali and *Bhagavat Gītā and* Aśvaghoṣa's scheme of *yoge*. The *Yogācāra* School was influenced by the philosophy of Nāgarjūna, the *Sūtrantika* Onthology, and *Bhagavat* traditional method of *yoge* and the Patanjali's *Ashṭanga* scheme of *yoge* (Feuerstein 1996: 26). Sūtrantikas are considered as the precursor of *Yogācāra* idealism, as many *yoge* practices are common in both (Kiyota 1991: 142). The *Yogācāra* emphasis on withdrawal from everything follows the traditional method of *Bhagavat yoge*, who considered it a potent means to draw from the material world. Milindapañha speaks of the qualities of a *yogee*, especially when he becomes 'one with the whole' (Shaw 2006: 142).**

The Buddhist central precept of suffering and emancipation from suffering is the classical *Upaniśad* and *yoge* problem. According to *Samkhya Sūtra*.II.1 the body, the senses, the perception all are suffering and all lead to the suffering (Eliades, Willard & David 2009: 11). Buddhism also owes much to *Bhagavat Gītā* (Fatone 1981: 15). *Bhagavat Gītā* describes a *yogin* as concentrating at the tip of his nose (Winternitz 1977: 430). The *dhyana mudra* (the mudra of the meditation) of the Gandhāra relief reveals Buddha's dreamy eyes, showing his 'One Pointedness', where the eyes are fixed on the

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[1] ***Ariyapariyesana sūtra*** **of Majjhima Nikāya describes that he learnt from them *Samkhya yoge* stages, i.e., *akinci*-emptiness, *Akincaññāyātana* (infinity in space) and *Nāvassannā-nā' sannayātana* (neither consciousness nor unconsciousness)**

[2] ***Abhyasa*- to engage, to abide and *Vairagaya*-dispassion. The concept of bi-polarity maintains that the stream of conscipousness flows in both directions, the good, and also to the bad. The one commencing with discernment (*viveka*), and terminating in kaivalya flows to good. The one commneciong with lack of discernment (*aviveka*) and terminating in conditioned existence (*samsara*) flows to the bad. Through dispassion (*vairagya*) the flowing out to the sense objects is chechked and through the practice (*abhyāsa*) of the vision of discernment the stream of discernment is laid bare.**

tip of the nose to aid the memory (Ingholt 1957: 47). Buddha is also shown sitting in the lotus posture. Lotus is a symbol of cosmic menifestations and associated with creation of all life since *Purānic* mythology. The lotus posture (*Vajraparyankasana* posture), i.e., sitting cross-legged with upward feet, is one of the most important symbol of the *yoge* practices. It provides sound approach to meditation and governs energy and vitality of the base of the body (Coulter 2007: 589; Eliades, Willard & David 2009: 66).

Patanjali describes two *dharanas* in *Yoge Sūtra,* i.e., *ekāgratā* and *ekāgrya,* both meaning 'One Pointedness'. The sensory inhibition and focusing on an object is facilitated by muscular control attained through *asana* (sitting postures) and *pranayama* (breath control and breath stoppage) opens the doors to 'One Pointed of Mind' (Feuerstein 1996: 84). Breathing is also a prelude to the Buddhist meditation. The breathing techniques were considered as life sustaining act, and also improving the creative activity since *Upaniśad* Period. The regulated breathing calmed the nerves and increased the body's supply of the invisible life energy, i.e, *para* (Fischer & Taurus 1997). In order to inhale maximum oxygen from environment the sustained sitting postures were practiced.

The *Sanā Sūtra* of the Senior Collection contains definitions of four meditative practices; including the Perception of Foulness (*asubhasanna*)[1] introduces how a monk should position himself in preparation for meditation and directs him to focus on his body. The second is the list of parts of body, especially those that are related with 'One Pointedness of Mind'. The breath stoppage opens the doors to 'One Pointedness'. The Yogācāra School also shares the breathing techniques, the *asanas* and the control of the vital function for the attainment of occult powers with Patanjali's Ashṭanga Yoge[2] (Garg 1992: 684). The breath stoppage and the One Pointedness of Mind lead to tranquility and clarity of the inner-self (*adhyatman*). The tranquility is shared by the oldest *Upaniśads*[3] and *Bhagvat Gītā*. The *Upaniśads*, *Bhagavat Gītā,* Patanjali's *Yoge Sūtra, Dhammapada.28, Mahavagga.1.5.7,Milindapañha.387* and *Ahirbudhnya Samhita.XV.71-72* share the metaphor of a *'tranquil, griefless person'* who is like "*a person standing on a mountain top and (looking down on) the valley dwellers, all grief stricken creatures"* (Feuerstein 1996: 93).

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[1] Other three being Perception of Death (*maranasanna*), Perception of the Repulsiveness of Food (*āhārepatikkūlasanna*) and Perception of Non-Delight in the Entire World (*sabbalokeanabhirasanna*)

[2] also known as Hatha yoga

[3] i.e., *Katha Upaniśad.II.12; VI ı8* and *Praśna Upaniśad.III.I.12,*

The extreme renunciation of Siddharta and the ascetics were the favored theme of Gandhāra Buddhism (3rd-4th *c.* CE) and not the Mahāyāna Buddhism of South India (Huntington 1985: 142). The Buddha is shown meeting with the ascetic Brāhman who is sitting in a leaf hut (see Pl. 7a). The Visit of sixteen ascetics from Takht-i-Bahi is one of the best executed among the Gandhāran reliefs (Ingholt 1957: Fig 106). There are rare examples in other parts of the Indian Subcontinent, except one from Mathura, where a relief on grey schist was possibly taken from Gandhāra (Behrendt 2007: 58). The Gandhāra relief also shows Buddha training his monks in a number of scenes. In a relief from Jamal Garhi Buddha is shown training six monks in meditative practices, seated on rectangular stone seats, with covered hands (The Buddha Among His Monks from Jamal Garhi, placed in Lahore Museum Ingholt 1957: Fig 97).

The Kuśan Period and some later 'Fasting Buddha'[1] (dated to 3rd-5th *c.* CE after Behrendt 2007) showing extreme renunciation is the favoured and among the best executed specimens of the Gandhāra art, showing the empirical knowledge of the anatomy, detailed bone structure, tendons and sunken abdomen of Prince Siddharta (Behrenedt 2007; Ingholt 1957; see Table No. 5 & Pl. 7 a & b).

The *Buddhanusmrti* meditation corresponds to the Pre-Buddhist *Darśana* (meaning a 'vision' or 'seeing an event', but generally interpreted as 'a systematic attempt to represent how the reality is). The Samkhya and yoge were also based on *darśana* (Burley 2007: 1; Thakar 1991). *Buddānusmrti* (visualization practices), recollection of Buddha or imaginative techniques for evocation of his presence by means of structured meditative procedures, were well established in Gandhāra, China and Central Asia by early 5th *c.* CE. A whole series of 'visualization Sūtra' were translated into Chinese (Kinnard 2001: 76). The Tibetan Canon attributes eight *śāstra* to Nāgarjūna, among whom five[2] are authentic. All these *śāstra* refer to *Buddhanusmrti*, where Nāgarjūna directly addresses to Buddha, as if he was seeing him in front of him (Mitrikeski 2011: 91)

The Yogācāra School focused on Meitreya visualization, rather than Buddha visualization by 5th *c.* CE. The *Maitreya-nama-hāsimhanāda Sūtra,* written in Northwestern Provinces in Kuśan Period, firmly lays monasticism in forests, revealing a

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[1] For instance, the one from Sikri, now placed in Lahore Museum; from Takht-i-Bahi now placed in Peshawar Museum; and the one from Gandhāra (provenance not known) now placed in Metropolitan Museum.

[2] i.e., *Stutyatitastana, Dharmadhātustotra, Cittavajrastana, Dvādaśakāranayastotra,* and *Astamahāsthānacaityastotra*

concerted effort to revitalize the 'old' forest ideals, that the present researcher have already located in ancient *Aśrams* of *Upaniśads* at Taxila and surrounding areas. 'The Sūtra of Meditation on Meitreya Boddhissattva's Rebirth on High in the Tusita Heavens' were secured from Turfan manuscripts and translated into the Chinese language in 455 CE. Many early Buddhist missionaries of *Jibin* to China emphasized visionary and supermundane experiences of visualization through meditation. Many early Chinese cave temples were founded by the *Dhyana* Masters (Rhie 2002b: 19; Wong 2004: 92).

4.5.2 Meditation and monastery architecture: **The monastery plan has been the subject of scrutiny and speculation for many decades. However, we suggest that the architecture of some of the Gandhārā monastery directly corresponds to the meditation practices. The multi-storeyed cells on four sides of a small square courtyard; the absence of windows in the monk's cells; and broad *virandas* in front of them, were built to bar the unnecessary sounds and sunlight to the residential area in all probability; thus imitating a poised and a quiet cave environment. The subject is wide, but the present study delimits it to the Taxila Monastery architecture due to time and financial constraints. Nonetheless, it is a promising subject for future researches to further north and north western regions of Gandhāra.**

In earlier Gandhāra monasteries we do not find a complete rectangular plan. At Akhauri and Kalawan monasteries, the cells were arranged on two sides of the courtyard; at Giri D, on three sides; while they were arranged on four sides at a mature stage of the monastery architecture, i.e., Dharmarājika G and H, Bhamala, Giri B and F, Julian and Mohra Moradu (Calleri 1989: 114). Marshall reported broad *virandas* in front of the cells and suggested a wooden *viranda*. He further proposed a 'central water tank' meant for ablution purposes of the monks, with the stairs descending into the tank. Often a 'bathroom' existed at a corner of the tank (Marshall 1918: 27; Spooner 1909: 105). The later excavators supported the notion of a 'central water tank' (Behrenedt 2003: 34; Calleri 1989: 114). We question this traditional interpretation on following grounds:

1. **The oblution practices require systematic arrangements, i.e, the raised seats and an attached elaborate drainage system. One finds a covered undergroung drainage system with no opening in the central space. Moreover, there were no signs of the raised seats, be might be needed for the oblution purposes. The underground drainage was obviously meant to collect and drain the excessive water from the monastery area.**

2. **The central courtyard was surrounded by high buildings from all four sides, thus reducing or even eliminating direct sun rays to the courtyard. If this space was used as a water tank, with regular ablution practices, it might have bogged the whole building, as water becomes polluted without direct sun rays.**

3. **The central space was the major open-air space in the monasteries. If this space was occupied by the water tank, it might have restricted the open-air activities of the monks, leaving them to use the adjacent outer space of the monastery, thus greatly impacting the privacy of the monks.**

4. **Last but not least, an attached bathroom (in center of a living area) is a 'Western' and not a traditional 'Eastern' architectural concept. Traditionally, the bathrooms were placed at a far corner of the building, or altogether away from the buildings all over Gandhāra.**

Rather we suggest a central courtyard in the Gandhāra monasteries on account of the researcher's observations, the analogy and the inference methods.

If one looks carefully at the 18th -19th *c.* mansions of Gandhāra, the courtyard was surrounded by rooms on 2-4 sides with *verandas* in front of them. The rooms and the *verandas* were raised higher than the courtyard. It gave an imposing effect to the building, optimum air circulation and also a smooth flow to the drainage system. The stairs ran down from the *verandas* to the central courtyard (see Pl. 8a).

Marshall suggests that the water tanks were used for the oblution purpose. Nonetheless, a careful survey of the Gandhara monasteries yields that wells with paved platforms existed all around the monasteries. The raised platforms were provided with proper drainage system. These were used for the ablution purposes in all probablity. The Buddhist wells were of two types; 1) **the large wells for agricultural purposes, and** 2) **the small wells for drinking water and also for oblution and the washing purposes.**

The typical Buddhist wells were square, circular, or circular with a square rim. These were constructed of large diaper or semi-diaper masonry. The small wells manifested raised and circular platform around them. The platforms were provided with stairs on one, two or four sides. Sometimes another high platform existed on one side of the well. One or two small water tanks existed close to the plateform. These were possibly used for quenching small animals, like sheep, goat or the donkeys. The researcher conducted a short survey of Taxila monasteries and Manikyala stupa and brought forth the following results.

The Shahpur well in the Shahpur village is lying about 0.5 km south of Dharmarājika stupa. It posseses typical Buddhist structures, i.e, a high platform, small water tanks and an elaborate drainage system (see Pl. 8b, 9a). Another Buddhist lies in the village of Tibian, a few meters east of Taxila Museum.

The Mohra Moradu well in northeast of the Mohra Moradu monastery has a square mouth (1.15 sq m), but a circular body. It is surrounded by the typical Buddhist structures, i.e., a high platform on south of the well.and a small water tank (3.45 x 1.15 m) on north of the well. Archeaologically the Buddhist wells with square rim have been attested in Gandhāra relief[1]. Marshall (1975: 322) mentions the well besides the Kalawan monastery, and several wells around Julian monastery, contemporary with the monasteries.

Four wells and two water tanks exist in close vicinity to Mankiyala Stupa, District Rawalpindi (see Pl. 10a & b, 11a & b). The wells have been designated as well no. 1, 2, 3 & 4 in this study. All wells exist at a distance of about 0.5 m from the main stupa. Three of them lie in one line, running in a roughly west to east direction. Well no. 1 exists to west of the main stupa. It was a circular well with a square rim (1.5 sq m). The core of the well was built of large concave stones to give it a circular shape. The present level of water was 3.5 m deep. A roughly preserved pavement with large carved stones (some as large as 1.7 m) was present all along the mouth of the well.

Well no. 2 was a square well (1.7 sq m at mouth) with a raised circular (dia 6.5 m) platform all around it. A square depression, possibly meant for dedicatory stone, existed on western wall of the well. The platform although cemented in modern times, but its core was possibly contemporary to the well itself. Typical Buddhist small water tank (1 x 0.5 m) existed at southwest of the platform. The small water tank was carved out of a large stone. The water level was 15 ft deeper than the existing ground level.

Well no. 3, lying 50 m apart from well no. 2, was a large well, meant for agricultural purposes. It was a circular well with a square core. The water was present at the depth of 7 m. The internal structure was atypical to other Buddhist wells. There were four broad stone pillars in four corners of the well. The pillars stopped short about 2 m below the rim of the well. The purpose of the pillars could not be ascertained at present level of research.

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[1]Relief entitled as Buddha emerging from city gate and a woman drawing water form a well. Dar 1999/2000: Fig. 17, Lah.2169/GR 1382.

The well no. 4 lying 10 m north of well no. 3m, was not in line with the previous wells. It had a rectangular rim with a circular platform. The water existed at a depth of 6.4 m. The wells no. 1, 2 and 4 were still in use. The villagers believed that these three wells were ancient. They reported cold, sweet and healthy water. Whule other wells in the surrounding area yielded hard water. The villagers also believed in a lake running underground the wells no. 1, 2 & 3. The matter needs a systematic probing. The advanced hydrological technology mentions two types of the subsurface equifers; first, the water between the tiny earth grains or bits of fractured rocks, and second, the underground lakes. The wells are connected to first type of water resource, or conversely, they may be hydraulically connected to underground streams[1] (Jain, Pushpandra & Vijey 2007; Rodda & Matalas 1987: 57; Townsand *et al. n.d.*).

Other archaeological surveys also brought forth numerous Buddhist wells lying close to the monasteries. For instance, Rehman, Khattak & Faiz-ur-Rehman (1996) reported wells at Said Karim Pato (Ashizo Area), near the Gumbat Colony, Shaheeda and besides Ramanrai stupa and monastery at Badgragah site. The Buddhist baolis have been reported at Bakhai (Gumbat Colony), near Karappa, and Chalan Dheri (1st-5th *c.* CE), in Buner District (Rehman, Khattak & Faiz-ur-Rehman 1996: 57). The latter also had a water tank in its close vicinity, fed by a natural water spring. The wells were also found lying close to the water springs around the Buddhist monasteries and stupas in Durran Pass and Gumbad Darra. The natural water springs might have increased the water level of the wells. A square well was reported at Baid Kaim Pate (Nawa Kale) (Rehman, Khattak & Faiz-ur-Rehman 1996: pl. 27, fig. 52).

Swāti (1996: 55, 94) reported the Buddhist wells in diaper masonry, in Barikot in Karakar Pass of the Swat valley, and also near Tirath religious site. The well was buried in past. However when it was dug and cleaned by the local people it yielded cold and fresh water. Khokar (2003: 198) mentions that the Sard Chah Darwaza (Cold well Door) of Peshawar city was named after a Buddhsit well lying besides the city door. The water was so cold that once it was meant only for the rulers.

The villagers reported the remains of an extensive water tank (Mankiyala Water Tank 1), 1 km west of the Mankiyala Stupa. Once it covered 2.5 acres of land, but it was dried up and later filled with earth to build a village over its remains.

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[1]Infra 4.6.1 argues that the Gandhāra Buddhists possessed an informal knowledge of detecting underground water resources.

The Manikyala water tank 2 lying 1 km west of the Manikyala stupa is an extensively built structure (see pl. 11b). It had an underground water supply system, once connected to a rain torrent. Intenally the water tank was lined by a double row of the diaper masonry built in a stepped manner. The villagres reported that it increased the volume, and also served as a security against an accidental fall in the deep water. Five sets of the stairs were descending in the water. The stone foundations of a small bathroom were pesent on the southeastern corner of the water tank. Similar Buddhist water tanks also exist at Saidpur village and besides the village of Shah Allah Ditta in Islamabad.

Two water tanks exist in Hassan Abdal city, District Rawalpindi. Though still in use, but these water tanks are believed to be of great antiquity. The wate tanks in Hassan Abdal are mentioned by Huan Tsang, and again by the Mughal Emperor Jahangir, while travelling from Kabul to Lahore. Huan Tsang mentioned ten tanks of clear water around a stupa in Singapura around a Buddhist stupa, about 185 km southeast of Taxila. He mentioned that the water tanks had lotus flower (Rashid 2005: 63).

Other archaeological surveys support the findings of the present researcher. Rehman, Khattak & Faiz-ur-Rehman (1996: 32) reported a number of water tanks along Buddhist stupas and monasteries in District Buner; naming a few Bingalai Stupa II, and Lobo sites in Amazai area in Munar hills, Banglo Sar site. Some sites were even named after the water tanks, e.g., Talab Pate (water tank). Some water tanks were circular and had a number of rooms around them; believed to be washrooms by the explorers.

The literary evidence also provides clue to the Buddhist period water tanks. The *Digha Nikaya* describes open air bathing tanks with flights of steps leading down to them, faced entirely with stone. We also find references to the Mauryan Period water tanks, constructed near the natural water sources, i.e., the rain torrents, the water springs, the man-made canals or the rivers in Kautilya Arthaśāstra. Songyun reported water tanks besides the Buddhsit monastic establishments in Uḍḍiyāna. I-Ching mentioned monks coming in groups to the water pools besides Nalanda monastery, and taking bath there in morning (Bakhsi & Lipi 2000: 216-17; Beal *n.d*. b: xcv; Rhys 1999: 74).

The Caraka Samhita and *Sušruta Samhita* (Kušan Period) contain special instructions regarding the morning bath and ablutions, along with morning and evening walks. There may be a relationship of the morning and the evening walks with the morning bath and ablution. The built structures along the wells, the foundations of rooms along the water tanks of Buner District and Water Tank 2 of Manikyala monastery may support this idea (White 2004: 52).The foregoing discussion suggests that water wells

and the tanks were used for ablution, bathing and the washing purposes; and not the middle area of the court of cells of the monasteries. The matter of 'bathrooms' will be discussed later in the present sub-section, suggesting that the structures traditionally interpreted as 'bathrooms' possibly represented the memorials of the meditation seats of the renowned teachers.

The present study also argues that some of the Gandhāra monasteries were built in imitation of a cave structure. The cave meditation has significant impact on the Māhayāna Buddhism. The Chinese sources mention Gandhāra as *Shih-shih-kuo,* i.e., the Cave Country, with its capital at *Shih-shih-ch'eng* or the Cave City, referring to Taxila (Beal *n.d.*: 30). The Kalawan Monastery refers to a 'cave monastery', as the word *Kalawan* means 'cave'. The Asanga of Gandhāra spent twelve years meditating in a cave. Diganga was a direct disciple of Vasubandhu of Peshawar. He lived in a cave on Bhoraśaila I Orissa and died in the forest (Phyllius 2004: 69; Potter 2003: 313).

The dark and poised caves provided an ideal environement for the meditation practices. The caves were acoustically cut off from the outer world. The rectangular, and ideally the square courtyard, with two to three (or even more) storeys building all around it, barred the direct sun rays to enter into it for most part of the day. The broad *virandas* on four sides of the courtyard, and in front of the cells caused a dark inner environment ideal for study purposes or writing the treatises. The Chinese pilgrims refer to the great teachers, who wrote down treatises while retreated to their monastic cells. Huan Tsang refers to an old building in a Peshawar monastery, with an identification plate naming Vasubandhu who had prepared there world renowned *Abhidharmakośa*. Vasumitra came from *Madhyadeśa* to a Peshawar monastery where he wrote down *Abhidharma Prakarana-pada* Dharmamatrata, Master of *śāstras,* composed *Samyuktabhi Dharma Śāstra* in a monastery in the suburbs of Peshawar; Skandhila composed the treatise *Vibhasha-prakarana-pada Śāstra* in *Mia-lin* monastery (Beal 1884: 109-110, 160-162).

The monk's cells were devoid of the windows. Marshall (1951: 360) reports windows on the western and southern sides of the monks' cells at Mohra Moradu monastery. The windows were placed about 2.40 m from floor level, narrower at the top then the bottom and contracting considerably towards the outside. A careful observation reveals that these permitted only scarce entry of the sun rays into the monk's cells and served as the ventilator slits and not the windows. Such ventilators for light and air were in vogue in Gandhāra houses and mansions till the early parts of 20th *c.* CE. Other scholars suggest that the buildings without windows served the security purposes (Behrenedt 2003: 33).

Conversely the present researcher suggests that not the security, but a restricted light and sound entry was the prime concern of the builders.

The acoustically sound structure reaches its zenith at Jinnah Wali Dheri monastery, situated about 10 km northeast of the Taxila Museum, dated to 2nd-5th *c.* CE (Ashraf Khan & Mehmood ul Hassan 2009: 306). Its monastic area is a perfect square, with a square courtyard, and square living cells (2.90 sq m). The walls of the monk's living cells are 1.50 m, with a 1.40 m deep entrance to every cell, making them totally detached from outer environment, and thus providing a serene and poised internal environment (see Pl. 13a & b). There are depression for large cupboards in the northern walls of the cells, the small shelves in eastern walls and the niches, perhaps meant for oil lamps in the western walls of the cells. The cupboards were perhaps once fitted with wooden frames and shelves (see Pl. 14a). The 2.80 m deep *viranda* on all four sides of the square courtyard (10.5 sq m) made it further dark and composed.

The Gandhāra monasteries had a rectangular or square courtyard with wide *verandas* marked by the stone pavements (see Pl. 12a). The stone pavements were traditionally used to give stability to the base of the pillars, so that they do not sink in the ground under the building's thrust and pressure. The Pippala monastery had a small courtyard (3.5 sq m, 0.20 m deep), but a wide *viranda* (3.40 m wide with an extra 1.40 m pavement for the wooden pillars (see Pl. 12b). There was a space of about 0.8-.1 m in between the base stones and the courtryard. The roof was perhaps extended beyond these pillars, as it was a traditional practice in building a pillared *viranda,* thus reaching to courtyard level. Marshall reports at least a double storeyed building of the Pippala monastery. If we imagine a standing building on basis of the layout of Pippala monastery, we can imagine a tower like building similar to those in the inner cities of Rawalpindi and Peshawar. Such houses had a small courtyard, covered by a screen at its upper end, with pillared *virandas* on all four sides and rooms opening in the *virandas*. These houses remained dark throughout the year. They remained in vogue till early decades of 20th *c.* CE. Perhaps they took impetus from Gandhāra monasteries. The highly embellished architecture of the Buddhist monasteries might have served as an architectural model for the elites of the later centuries. Nonetheless, it is a broad generalization, and we leave the case for further systematic probing.

The Marshall's excavations of Pippala monastery yielded a cell (2.90 X 3.80 m) in southeast of the corner of the court of cells (see Pl. 14b). It was lying about 0.40 m lower than the courtyard, and had a small stupa in its midst. The acces to the cell was

originally provided through a window[1]. Marshall (1975: 366) interpreted the stupa cell belonging to an earlier construction phase of the monastery on basis of its lower floor level. Nonetheless, the lower floor level of the cell, and the stupa in its midst has a particular relevance with the meditation practices. A square (2.67 sq. m) meditation cell with a stupa in its midst, is also found at Mohra Moradu monastery. All the existing Buddhas on the stupa are in meditation pose. These cells might have been the meditation cells of the important teachers. The Buddhist legends relate that the relics of Shariputra, one of the Buddha's closest disciples, were enshrined in a lay disciple's house for veneration (Beér 2004: 127). Moreover, traditionally the advanced meditation practices were carried out in the lower cells or underground chambers. We find examples in Medieval Muslim practices, i.e., the underground meditation chamber of Syed Ali *bin* Usman Hajveri, generally known as Data Ganj Bakhsh, in Lahore Fort, Lahore; the underground meditation chamber of Syed Jamal Allah Qadri Gilani, generally known as *Zinda Peer,* Hassan Abdal, District Rawalpindi (1.50 m lower than the existing floor level, 2.3o sq m), opposite Gurudwara Punja Sahib (see Pl. 15a) and the underground cell (1.80 x 0.90 m, 2 m deep) in Kalyam Sharif, District Rawalpindi. The cell was used for 'Perception of Death' in early parts of 20th *c.* CE (Care taker and heirs of the tomb: personal communication. see Pl. 15b).

The cave meditation was of high value to the Māhayāna Buddhism. Asanga is said to have spent twelve years meditating in a cave in a hope to meet boddhissattva Meitreya (Phyllius 2004: 69) and attained the third stage of *boddhisattvahood* (King 1999: 44). As explained in the section 4.1.4 of the present study, an extensive Buddhist cave complex has been recorded at Gondrani, Las Bela in Mekran, Baluchistan. A cave of impressive dimensions is lying in a hill approximately 0.5 km southeast of Mohra Moradu monastery (see Pl. 16a). The cave is 12m wide (from north to south) at its mouth. The cave continuously descends from its mouth to the internal parts. It is reported to be internally running about one kilometer. Although there are no built structures in or around the cave, but its close vicinity to Mohra Moradu monastery is significant. Another cave of similar dimensions is reported besides Bhamala monastery in District Hazara.

The Shah Allah Ditta cave complex in Margallah hills is lying about 3.6 km from Golra Sharif in Islamabad. These Buddhist caves were first mentioned by Alexander Cunningham in 19th century (1871: 105). The caves spread from east to west, on mouth of the Gariala spring (see Pl. 16b). The complex consists of three caves and a courtyard

[1] Presently one enters into the stupa cell through a door and not a window.

in front (7.5 x. 5.5 m). The Cave No. 1[1] was 5.8 x 3.2 m (l. x. br.) with 80 cm broad platform running along two walls of the cave (see Pl. 17a). A similar platform with smaller dimensions (2.30 x 0.80 m) was found along the northern wall of the meditation cell of Syed Jamal Allah Qadri Gilani, Zinda Peer in Hassan Abdal (see Pl. 17b). The Buddhist caves with similar platforms are reported from Swat Valley (Dr. Luca Maria Oliveiri[2], Personal communication). The cave no. 2 was 6.7 m in length with a varied width (see Pl. 18a).

Several meditation seats are preserved and still revered in the modern limits of the ancient Gandhāra. Important among them is the Saidpur village in Islamabad, traditionally ascribed to Raja Man Singh (16th *c.* CE). However, Dr. Ahmad Hassan Dani reported the remains of a Buddhist stupa in 1971 (Minallah 2007: 51). The meditation place of *Zinda Peer* at top of the hill manifests centuries' old Banyan trees (spreading 33 m from east to west) (see Pl. 18b, 19a).

Now coming back to the question of 'bathrooms', we can safely describe these structures as the meditation places/seats. Marshall (1951) reports several 'bathrooms' in northeastern or southwestern corner of his proposed 'water tank' in the Taxila monasteries, *viz*, Court 'H' of Dharmarājika monastery, court of cells 'B' and 'F' of Kalawan monastery, Kunala monastery, Mohra Moradu monastery (see Pl. 19b), Julian monastery and Bhamala monastery, at Taxila. Marshall (1975) plates 61, 72, 86, 93, 98 and 114 show these 'bathrooms' in the northeastern or southeastern corners of Dharmarājika monastery, Mohra Moradu, Kalwan Kunala, Julian and Bhamala in Taxila and Haripur, Hazara. At Julian monastery he reported a small 'bathroom' with a drainage system, with its walls standing upto the height of 1.5 m with two doors on north and south sides. He was not sure of the purpose of doors in such a small chamber. Similar small structure (2.80 x 2.70 m), with walls and two doors, stands in the southeastern corner of the court of cells of Takht-i-Bahi monastery (see Fig. 1 & 2, and Pl. 20a).

The researcher suggests that the raised square platform did not represent a bathroom, but probably a meditation seat of an important teacher. The Buddhists used the meditation seats for internal and external visualization practices, as instanced by the meditation phrase "Let my body whither with this seat of meditation". Huan Tsang also refers to extensive seated meditation practices (Beal 1884).

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[1] from east to west

[2] Director Italian Archaeological Mission in Pakistan

If one examines the drainage system of the square structure in the southeastern corner of Takht-i-Bahi courtyard, one will find that the drainage system was not meant for the structure. Rather it passed underneath the raised plateform, giving way to the drainage of *virandas*/rooms. Moreover, the openings to the walled structure seem to be windows and not the doors, as they were placed above the floor level. No stairway lead to these openings. Ethnographically speaking, the access to the sacred sitting/meditation places and sometimes the cenotaphs of the saints were provided through windows and not the doors. The common belief was not to provide a free entry to the devotees to safeguard the sanctity of the highly venerated place. We find a similar square structure above a votive stupa in south of the Takht-i-Bahi stupa court (see Pl. 20b). As far the Northeastern and Southwestern direction of these square structures, I could not find any Buddhist text specifying the cosmological rules for Buddhist structures at present level of my research. However, we know that the Buddhist monasteries were built on cosmological principles. The *Vedic* architectural rules may help us to understand the cosmological principles, as the Buddhist and *Vedic* rules for meditation converge at several points. *Vastu Śāstra*[1] mentions that east is the source of harmful ultra-violet rays and north is the source of beneficial magnetic energy. Thus the rays meet at northeast direction. Similarly, the useful infra-red rays come from south and the desctructive gamma rays come west, making the southwest a converging point for both kinds of rays (Narang 2006: 20). Meditation at these points may have brought significant effects to the practitioners. Even today the Śurangama Sūtra is considered as the most powerful sūtra in the World. Its everyday recitation saves from harmful nuclear radiations (Epstein 2003: 192).

It was a tradition in the Muslim Tombs of Potohar Plateau to preserve the meditation seat of a saint, till early parts of 20th *c.* CE. We find the raised, square seats, either in one corner of the courtyard of a monastery, or along the tomb of the saint. These raised platforms are either devoid of a superstructure; or posses a cemented or a wooden superstructure, revealing a pavilion (Pl. 21a & b, 22a). The meditation pavilions were invogue in the area for several centuries. We find references to the hermits dwelling in huts, or canopied pavilions, supported on posts and without walls, open on all sides, since *Vedic* Period (Kramrisch *n.d.*: 59). Furthermore, the square is fundamental to the mysticism. The earth is called as *Caturbhrsthi*, i.e., four cornered in *Ṛgveda.*V.58.3. The focal points where the heaven and earth seem to meet, where the sun appears to rise and set, east and west, and the other cardinal points complete the square. The altar, used for

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[1] Written in 3rd *c.* CE, but presents the concepts of much earlier *Vedic* Period.

funerary rites was square. The square is the mark of order, the form of finality or death, and of perfection beyond life and death (Kramrisch *n.d.*: 22). The Tibetan texts (8th-9th *c.* CE) reveal that the square base of the iconographic proportions of the Buddha's throne and of the stupa base is same (Beér 2004: 129). The bases of the main and votive stupas were always a perfect square.

The later temples and monasteries in China, Japan, Śri Lanka, Nepal and Kaśmir continued the tradition of a sunken courtyard in the midst of the monastery (see pl. 22b). For instance, the earliest Buddhist temples in Japan in 7th *c.* CE[1], e.g., the Horyuji Temple (670-714 CE), and Temple of Todaiji (began in 760 CE) were initiated after Buddhist Temples in China. The Pre-Buddhist secular and religious architecture in Japan was totally different from the Buddhist architecture. The temples had a square layout, the buildings on raised podium, with a sunken courtyard in the center. The courtyard was entered through a formal gateway. The method of inserting pillars also took its initiative from Chinese monasteries that were inturn initiated by Gandhara monasteries. In contrast to the traditional Japanese buildings where posts were directly buried in the ground, the Buddhist temples employed partially buried foundation stones to keep posts from sinking and to raise them slightly above the gound level (Young, Michiko & Tan Hong 2004: 35). The 7th *c.* CE Māhayāna monasteries of Chabahis and Bahal in Patan, Nepal, were built on the same ground plan as that of the Gandhāra monasteries. The central courtyard was sunken for about 50 cm below the ground level (Pant & Shūji Funo 2007: 60). The *Kuana* Type Buddhist monasteries (*chatuh-sala,* i.e., the lay out of the Gandhara monasteries) contributed to the architectural standards of the Kaśmiri Hindu temples. The Medieval Hindu Temples in Kaśmir were modeled in lines of *Vihara* architecture where courtyard was sunk below ground in midst of the building (Hānda 2001: 102; Pushp 2001: 41).

Later on, the central courtyard, the virandahs all around the courtyard, and the room opening in the virandahs became a hall mark of the urban planning in the modern limits of ancient Gandhāra. We find two to four storeyed buildings in the dense urban complexes of Rawalpindi and Peshawar cities. The plan was preferred for its practical usage. It not only provided privacy to the inmates, but also a continuous flow of the air movement. The arched virandahs further enhanced the flow of air (Michel 1995: 199).

4.6 The Life Sciences

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[1] As argued earlier, the monastery architecture was first introduced in China from Gandhāra; the same was transferred to Japan in 7th *c.* CE.

4.6.1 The pure sciences: **The biographies of the Māhayāna teachers reveal that they were not only specialists of the Buddhist philosophy, but also the logic, the poetry, and the secular sciences like Astronomy, mathematics, geography, and medicines. Nāgarjūna, Aśvaghoṣa, and the Chinese translations of the biographies of other Kaśmiri teachers may be mentioned in this context. Vasubandhu is said to have been familiar with the classical Indian medical art of Caraka (Aśvaghoṣa & Hamilton 2004: 24; Kak 2002; Lyall 1984: 141; Needham 1972).**

The fundamentally decimal place value system was derived in China from the concept of 'void' in Madhyamika philosophy of Nāgarjūna (Hassan Abidi 1990: 89; Kapoor 2003: 6). The reduction of time and matter into a series of atomic elements was one of the most characteristic features of Nāgarjūna, Asanga, Harivarman and Sangabhadra. Atom or *paramanu* was the unit of space and instant or *kusana* was the unit of time. According to *Satyasiddhi Śāstra* (Treatise on the Completion of Truth) of Harivarman all objects are first reduced to the molecules, then the atoms, then fine atoms, until finally this process of division and reduction results in emptiness. These scriptures describe fourteen types of atoms. The atoms grouped together to form the molecules (*samghāta paramānu* or *kalāpa*) and every material object was consisted of molecules. *Abhidharmakośa.1. Dhātunirdeśa* holds that atoms do not touch each other (Thomas 2004: 251). The Abacus was mentioned in the *Abhidharmakośa,* long before its use has been recorded in China (Kritzer 2005: 34).

The Theory of Relativity forms an especial position in the Nāgarjūna *Lankavatara Sūtra*. There is nothing self existing in nature; every thing is dependent on something else. Nāgarjūna mentins two types of knowledge, first the *Parikalpita* or self reality, a kind of imagination; and second is *Paratantra* or 'depending upon another', referring to the relativity of the nature. The modern sciences confirm that things are mutually conditioned and endlessly related to each other. The views of relativity and atomic theory lead to 'nothingness' of Madhyamika Philosophy, i.e., disintegrate things into their smallest parts, and there will be nothing in the nature (Suzuki 1956: xxxii). Einstein remarked *"if there is any religion that would cope with modern scientific needs, it would be Buddhism"* (Dukas 1954: 26).

According to *Lankavatara Sūtra,* a word (*ruta*) is the combination of sound and syllable (*akshara* or *vyanjana*). It issues from cavity of mouth between the teeth, jaws, palate, tongue and lips, when one is engaged in conversation. A letter (*nama*) means each separate letter distinguished as to its self nature. A syllable can be long, short or

medium. The sentence (*pada*) means the completion of meaning expressed in the sentence (Suzuki 1930: 10, 98).

There were seven days in a week, thirty *vasantas* or days constituted *Māsa* or a month; and twelve months in a year. There were two periods of moon during a month, i.e., *śukla paksa*, the white period when the moon was waxing, and *krsna paksa*, when the moon was waning.The rays of the sun were always same, neither increasing nor decreasing; the difference in their intensity was due to change in orbit, the clouds which act as screen to the sun rays and the mist that arises from earth. There was two-fold, three-fold, four- fold, five-fold and six-fold way of classifying the seasons (Chaudhuri 2008: 9). The two-fold classification was based on the gradual movement of sun towards north, and then to south, so there was a division of six months for each move of the sun. The three-fold division was the most common, when the year was divided into winter, summer and spring. Huan Tsang also described three-fold division of the year in India. In four-fold division, the year was divided into spring, summer, autumn and winter; in five fold, winter (four months), spring (four months), rainy season (one month); last season of one day and one night and summer (five months). The six-fold division constituted spring, later spring, summer, autumn, winter and later winter (Mc Govern 2000:45).

The *Abhidharmakośa* also refered to the cosmic geography, explaining that the Universe consisted of infinite number of worlds, all more or less on same plan as our own. The interaction of atoms and elements brought about the formation of the universe, consisting of infinite number of the worlds, scattered throughout the six directions of the space. The scripture describes the diameter of Earth in Buddhist *yojanas*; the continents and the subcontinents, with their shapes, circumference, islands around them, making the twelve large inhabited areas of the world. Earth was in shape of a cylinder. The visible part was flat however the inner core was a cylinder proper consisting of layers of different types of materials (Mc. Govern 2000: 50).

The *Abhidharmakośa* provides reasons for saltiness of the oceans, i.e., the pollution caused by the fish, and the earth's impurities being washed away into the sea. It describes drinking water as possessing eight qualities, i.e., purity, coolness, sweetness, softness, lightness, fragrance, while drinking it does not injure the mouth, when drunk it does not injure the stomach. According to *Caraka Samhita* the epidemics spread due to the pollution of air and water. The pollution of air consisted in its being unnatural for the season, dull and motionless, too violent, too dry, too cold, too warm, stormy, whirlwind, too humid, dusty, smoky, impure or of bad smell. The pollution of water

consists in its being unnatural color, bad smell, bad taste, containing impurities, unpleasant, and having its sources largely dried up (Kapoor 2003: 466; Mc. Govern 2000: 54).

4.6.2 The Psychology: **The modern psychology started focuses on the thought, perception, motor coordination, vision, hearing, touch, hunger and sleep using the scientific equipment and the tests (Kapoor 2003: 655). The Buddhist psychology is compatible with the modern notions. Rhys (*n.d*. xxii) maintains that the Buddhists psychology was more advanced than the Aristotle. Mc. Govern (2000: 96) argues that *Abhidharmakośa* divisions of *vedana, samjana* and *samSanskritara* are comparable to the notions of feelings, reason and volition in the modern psychological theories. The Yogācāra *vijñānavada* system is psychological, as it is based on the theory of perception, called as *vijñāna. Vijñāna* is the perceiving and discriminating faculty of the mind. It focuses on a critical and reflective understanding of the human mind. Sutton (1991: 260) stresses that the Buddhist psychology is better than the modern systems. It proactively focuses on the attainment of a healthy mind, rather than paying attention on an ailing mind.**

The Buddhist theories introduced the relationship of sight with the mind of the learner, by enumerating that the Consciousness arises because of two things, 1) **the faculty of sight (*cakswrindriya*) & the visible (*rūpa*) and** 2) **the mind (*manas*) & factors (*dharma)* (Willemen, Bart & Collett 1997: 196). *Abhidharmakośa* states that matter is composed of eleven basic elements, the five sensory organs, the five types of objects and *avijnapti* (unexpressed matter). The five types of objects are explained as visible matter, sounds, odors, tastes and tangibles. The visible matter can be divided into colors, including blue, red, yellow, white, light, and darkness. Sounds are divided into eight categories, tastes into six, odors into four and tangibles into eleven categories. The five sense consciousness constituted the eye sense (*caksur-vijñāna*), ear sense (*śrota-vijñāna*), the nose consciousness (*ghrāna-vijñāna*), the tongue consciousness (*jihavā- vijñāna*) and the body consciousness (*Kāya- vijñāna*). It also describes the sixth sense, i.e., thinking mind consciousness (*meno-vijñāna*), the seventh-afflicted thinking mind consciousness (*klista-menas*), and an eighth-*ālaya-vijñāna*. The first five consciousnesses[1] comprehend the shapes, sounds and tastes, etc. The atoms of eye ball[2] are diffused over the surface of the eye; just as the particles of flour poured over the surface of water would scatter, similarly the atoms composing the eye ball spread over the pupil of the eye. The**

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[1]***Skpravrtti- vijñāna***

[2]***Skcaksurindriya***

awareness of a visual object implies attention (*manaskāra*) and contact (*sparsa*). The scope of eye was greater than hearing. The sounds were of two types, first, *Upātta-Mahābhutahetuka*, the sounds produced by the objects having the power of perception, i.e., the living beings; and second, *Anupātta Mahābhuta-hetuka*, the sound produced by objects not having the power of perception, i.e, the non-living beings. The types are further sub-divided into the articulate and the non-articulate ones. The taste organs *(rasa)* were spread over tongue in the shape of a half moon. The touch atoms *(kaya indrīya)* were same as those of the body proper; every molecule of body contained one touch atom. The shape of touch atom was different in the bodies of men and women. The object of touch was divided into eleven groups. Vasubandhu maintains that the tactile consciousness can perceive all eleven groups simultaneously. The mind or *mana* possesses the functions of memory and reasoning (Kapoor 2003: 751; Mc Govern 2000: 99; Suzuki 2008: 79).

***Sūrangama Sūtra* also discusses the structure and function of five sense organs. For instance, ear was shaped like a young rolled leaf; eye like a grape; nose like a claw (end of a hammer); tongue like a cresecent moon and body like a trunk narrow in center. Intellect is like perception hidden in a dark room. The seeing depends upon pupils meeting an external object. The sense of smell was due to clearance (ventilation) and obstruction (suffocation). The tactile sense was due to feelings of contact and separation. When a man touches his cold hand with warm hand, if coldness exceeds the warmth, the warm hand will become cold and if the warmth exceeds the coldness, the cold hand will become warm (Ching *n.d.* : 130, 158).**

Rhys (*n.d.*, 16) remarks that the Buddhist sense of perception includes the concepts, the definitions, the detailed phenomena of tangible (*phasso*) and intangible *(phusati*) sensations and uprising of thought *(cittu ppāda-kandam*). It explains eight types of thought, i.e., 1) **relating to sensuous universe (*Kamavacara-attha-mahacittani*),** 2) **thought (*cittam*),** 3) **sustained thought (*vicāro*),** 4) **continuous adjusting and focusing of thought through zest (*piti*) and ease (*sukham*),** 5) **self collectedness (*cittas ekaggatā*),** 6) **faculty of faith (*saddhindriyam*),** 7) **faculty of energy (*viriyindriyam*), and** 8) **faculty of insight. The *cittas ekaggatā* refers to absorbed steadfastness of thought, *viriyindriyam* refers to faith as a power and energy and freedom from perplexity, and faculty of insight refers to the understanding and research. It includes the skills of discernment, discrimination, differentiation, proficiency, criticism, reflection and analysis.**

***Abhidharmakośa* relates that human personality is not a unit, but a compound of various elements, such as material body, consciousness, feelings, emotions and volitions. The**

mind includes several levels of consciousness, i.e., five s*kandha* (aggregates), six *pravesha* (entrances), twelve *ayalāna* (seats) and eighteen *dhatu* (kingdoms). The five *skandhas* are a group rather than a unit. *Rupa*[1]*skandha* referred to the physical body constituting thirty-two parts. The *vedantaskandha* is immaterial; referring to the feelings. The sentient experiences are result of five aggregates of material form (*rūpa*), feelings (*vedanā*), conception (*samjna*), perceptual consciousness (*vijnāna*), and motivations (*samskāra*).

Monier-Williams Sanskrit-English Dictionary (1964) refers to *vijñāna* as *"…the act of distinguishing or discerning, knowledge and understanding".* The definition corresponds to the modern concept of cognition. *Vijñāna* is associated with various cognitive functioning, i.e., perceiving, sorting out the sensory data, or input. The term *pravrtti-vijñāna*[2] refers to the senses arising in response to the agitations caused by the sensory stimulations. *Vijñāna* is the empirical knowledge, obtained as a result of a constant interaction with the material world. The Buddhist monks were supposed to analyze, classify and interpret the multiple states of perception. *Vijñāna* has three kinds of cognitions or *samkalpa*; first, *Svabhāva samkalpa*, the immediate sense perception of the object; second, *Smrti samkalpa*, memory or cognition of present sense data associated with the memory of the former similar or dissimilar sense impression; and third, *Samprayoge samkalpa*, reasoning based on the sense data (Mc Govern 2000: 104; Willmen, Bart & Collett 1997: 187).

Asanga and Vasubandhu both assert that the five senses are operative in all individuals according to their mental faculties. However, *ālaya-vijñāna*, the sixth sense, works only in some individuals, depending upon their level of spiritual perfection. The Māhāsañghika *Vinaya* gives a detailed description of the branches of learning a monk should learn. However, when it sets minimum standards for those who could not learn all branches, it relates the Doctrine of Aggregates (*Skandha*), the Sense Sphere (*Ayatana*) and Dependent Origination (*Prattityasamutpāda*) as most important doctrines every monk should learn (Kiechnick 2003: 4; Walser 2005: 129).

4.6.3 The moral and social education of Gandhāra Buddhism: ***Sūrangama sūtra* relates that meditation leads to *Śila* (control of mind) and right attitude. Nagārjūna's *Aryamūla Sarvāstivādin Srāmanerakārikā*, mentions that *śila* is the basis of all excellences (Passi 1982: 230). *Śila* comprised abstinence from sex, non-stealing and not lying; the most**

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[1]**Rupa meaning subject to transformation, disturbed, disintegrating**

[2]***Sanskrit vrtti* referring to the constant transformations**

important observances in attaining *Dhyāna* and *Prajna*. Control on mind was not only important for the monks, but also the laity. According to *Abhidharma-samuccaya* of Asanga the moral perfection leads to one's delight and satisfaction with one's own cognition (of the Truth), attained through suppression of senses and temperance in eating (Leningard 1932: 19). The control on speech, a basic tenet of the self control was attained through control on mind. Aśvaghoṣa in his *Buddhacarita* maintains that the Buddha's was a golden age. The people of Kapilavāstu avoided the four 'vices of speech', i.e., lying, slander, harsh language or insult to others and idle talk (Passi 1982: 70).

The Aśoken Rock Edicts proclaim that the root to toleration was attained through the restraint of the speech (Mookerji 1955: 72). The practice continued to the Kuśan Period. Sardar (2007: 157) reported an inscription, written in Gupta Brāhmī script, belonging to the Early Kuśan Period, *"(Let him be one) who guards his speech, is well restrained in mind, and commits no evil with his body. Keeping these three roads of action clear, one may gain the path taught by the sages"* (Oba Ghat Inscription II. *Dhamma-pada. 281*).

Compassion (*Karuna*) **is one of the chief moral and ethical values in Buddhism. In early Buddhism the idea of compassion appears as part of a prescribed discipline for members of the monastic community (Hamilton 2000: 146). The idea of compassion was highlighted by the Māhāsānghika and the Sarvastivadans. They used the term *Krpālu*[1]as an epithet to *boddhissattvas* (Nagao & Jonathan 2000: 2). According to *Sūtrālamkāra.XVII.43:"The compassionate love is blameless and world surpassing"* (Nagao 2000: 17).**

Avalokiteśvara, the *boddhissattva* of Compassion is probably the most venerated figure in Gandhāra, as well as in China, Tibet, Korea and Japan. He has the largest number and forms of figures, throughout the Buddhist world. The representation of Avaloketiśvara and Padmapani is highest in the rock art of Swat Valley (Sardar 2007: 174). The *Prajna* text, found among the Gilgit *manuscripts*, is marked by a new emphasis on compassion. The text emphasizes the training of the monks on the Path of Buddha-hood with wisdom and compassion. They emphasize on *dāna* (giving), *śila* (morality), *ksanti* (patience), *virya* (vigor), *samādhi* (trance) and *prajna* (wisdom) (Prebish 1994: 71). *Prajnaparamita-hrdya-sūtra*[2] is the *sūtra* of compassion. It is believed to have an ability to save people from pain and suffering, and bringing countless blessings to them. The

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[1]***Sanskrit* meaning one who is compassionate**

[2]***Prajna*-the ability to aware of the circumstance, Paramita-to reach the state of enlightenment, Hrdya-the place where the spirit returns**

Chinese traditions relate that Huan Tsang escaped death in extreme draught and hunger of the desert journey, while praying to Avaloketiśvara and reciting the *Prajnaparamita-hrdya-sūtra*. Even today, it is the most commonly copied *sūtra* in China and Japan (Kamata 1999: 10).

In the *Larger Sukhāvati* (1st *c.* BCE) Avaloketiśvara hears, sees, and thinks of the human suffering. Sukhāvati represents a land untouched by pain and distress (2nd *c.* CE) (Khettry 2001: 26). In *Saddharma Pundarika* (Lotus sūtra), Avaloketiśvara is the giver of safety, and is called as *Abhayandada,* one who releases mankind from its suffering (Krishan 1982: 221). The *Abhidharmakośa* talks about compassion of *boddhisattvas*. The prevailing mood of *Suddharma Pundarika* is that of compassion. The *sūtra* presents several *boddhisattvas* who could be of aid and assistance to the believers. It also explains the types of aids they could provide to members of all social classes, i.e., kings, ministers, merchants, poor men and women, and even criminals and non-human beings who call him for help. The Lotus Sūtra had an immense influence on the common masses throughout the Buddhist world in Asia due to its emphasis on compassion (Watson 1993: xvii).

The Buddhist teachers are traditionally linked with high compassion. Asanga is said to have meditated in a cave for twelve years in a hope to meet Meitreya. However, finally he met Meitreya due to his compassion to a dog, and not for the reason of his extensive meditative practices (Phyllius 2004: 69). The Vasubandhu's biography reveals that he was a saint of great compassion, who was greatly concerned with the physical well being of the common people. He is said to have built several hospitals, monasteries, schools and the rest houses in Ayodhya, Gandhāra and Kaśmir. The compassionate nature of the Buddhist teachers was perhaps one of the major factors that facilitated the propogation and spread of Buddhism throughout Asia. According to Ennin, a Japanese pilgrim to China in 7th *c.* CE, the Buddhist monks were the first to open free dispensaries, chains of free or low cost hostels, building of bridges and planting of trees along the roads. In the time of epidemics the Buddhist monks helped thousands of effected people with medicines and shelter (Ch'en 1973: 484; Galt 1951: 75).The Buddhist compassion had also become a source of imagination for Indian poets for several centuries. They dreamed the India regaining ancient noble stature of the Buddhist age. For instance, Rabindranath Tagore's poems *Abhisar* (Love's Sojourn), *Nagarlakshmi* (City's Maiden of Plenty), *Pujarni* (Maiden Worshipper), *Sreshta Bhiksha* (Best Gift of Begging), and *Dinadan* (Poor Gift), all revolve around the Buddhist concept of compassion (Majumdar 1993: 34).

Generosity: ***Dāna*****, i.e., 'giving others everything one possesses' was another important content of the Buddhist moral education. The *Jātaka* frequently highlight the merits of the *boddhisattvas'* generosity.Nāgarjūna clubs compassion and *dana* together in his Middle Treatise 17/1 (Bocking 1995: 257; Yun 2009: 68). Alms help to destroy evil. Hospitality was also closely linked to the compassion. Fa Hien mentioned the Uḍḍiyāna monasteries where the guests were allowed to stay for free for three days (Watters 1904: 158). Scholars are of the opinion that Huan Tsang left several legacies in China; however, compassion was among his most important legacies. It is said that he learnt compassion to the foreigners from his stay in Kaśmir and other parts of Gandhāra and India. Dosho, a Japanese student of Huan Tsang, who learnt Zen Buddhism from Huan Tsang and spread it in Japan, took the tradition of love for people from Huan Tsang. Later, he carried out a large number of welfare projects in Japan (Yong 1999: 7).**

4.6.4 Jātaka and Morality in Gandhāra[1]*:* **Story telling has been a popular form of ethical teaching in the Buddhist culture. Śila or morality is primary factor of all spiritual attainments in Buddhist *Jātaka*. *Jātaka* stories demonstrated the exemplary behavior of the *bodhisattva*s (Joshi & Banerjee 1998: 176). The *bodhisattvas* were shown as heroes and role models for teaching moral perfection, especially compassion, generosity, truthfulness, and self-control to common people. The *Jātaka* stories spelled out social norms and vices, to promote ideals in the society. I-Ching mentions that the object of composing *Jātaka* was to make the doctrine popular to common mind (Hamilton 1950: 149). *Jātaka* variously repeated vocabulary of moral perfection, e.g., generosity-*dāna*, morality-*śila*, wisdom-*pranna*, effort-*viriya*, patience-*isśanti*, truth-*sacca*, determination-*adhitthāna*, compassion-*mettā* and equanimity-*upakkhā* (Abeysekera 2002: 7; Bell 2000: 35; Ching *n.d*.: 250-253).**

The *Jātaka* narratives perhaps rose from oral tradition of Madhyadeśa and later on the Mahāyāna movement gave a new impetus to *Jātaka* traditions. We take a point here that both Madhyadeśa and Mahayana movement had strong relationship with Gandhāra. Bell (2008) maintains that the term Madhyadeśa refers to Hurayana, Uttar Pradesh and Bihar. However, Bagchi (1981:41) has already pointed out that the term was traditionally used by the Buddhists for the whole North India from Punjab to Bihar. At the wake of the British Colonization, the whole North India was called as Madhyadeśa to distinguish it from Himalayan Ranges or the Southern plains (Risley 1977: 32). Later on, the Colonial scholars translated the term Madhyadeśa as Central

[1] Aleady published as, 2014 A Critical Analysis of Morality in Gandhāra Jataka. *Ancient Pakistan*, XXV, 11-23

India. However, recently the scholars have largely challenged the traditional rendering of the term Madhyadeśa to a geographical territory. They rather suggested the term *Maddhyoddeśika/Madhy'yddeśika* meaning 'Intermediate language/recitation' referring to Gandhari Prakrit (Yuyuma 2001: xviii).

Williams (2009:158) argues that Māhayāna movement started in Indus Valley and Kaśmir. The paleographic evidence also reveals the earliest Māhayāna monasteries in Gandhāra. The British Library collection of 1994 expedition contains twenty nine birch bark scrolls written in Kharoshṭhī, revealing the earliest Dharmaguptaka monastery at Peshawar or the village of Hadda. According to Paramartha the Dharmaguptaka and Bahuśrutiyas, the earliest Māhayāna Sects were confined to Mathura and Gandhāra in early centuries of the Christian Era. A majority of the Māhāyana Sūtras[1] referring to 'Seven Jewels[2]' were composed in Kaśmir, Taxila, Afghanistan, Nasik and Barygaza and Central Asia (Xinru Lu 2010). There seems to be a consensus of scholars that Māhayāna Buddhism started in Northwestern regions. The Māhayāna *Jātaka* tradition had an immense influence on the teaching of moral, ethical, socio-cultural and religious precepts.

Gandhāra relief largely represents the figures of historic Buddha, life stories and future *bodhisattvas*. The *Jātaka* stories though small in number, but significant for their moral implications to society. In *Jātaka* exhibited in Gandhāra relief, Buddha or *boddhisattvas* are shown practicing compassion, moral rectitude, truthfulness, determination, self-training and self-control in everyday life scenes. Here, the power of religious art was used to develop and strengthen the behavior code and moral rectitude of the society. The miracles were added to *Jātaka* to make them more attractive to common people.

The Buddhist monks were possibly responsible for selecting the themes on Gandhāra relief. The literary and palaeographic evidence reveals that *Jātaka* were formally taught at the monasteries. The British Library Collection is a representative selection of the works of various types that were taught in monasteries. It contains

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[1] i.e., ***Saddharma Pundarika, the Pitaputrasamāgama, the Boddhisattvapitaka, the Tathagataguhya Sūtra, the Śsatesahasrika Prajnapāramita***

[2]*Suvarna*, i.e., gold, *rupya*-silver, *vaidurya*-lapis lazuli, *sphātika*-crystal or quartz, *mukta*-pearl, *lohitika*-a red precious stone or coral, *musāragalva*-ammonite, and *agate*-coral

sūtras, as well as *avadana* and *gatha* revealing Gandhāra lore and traditions (Salamon 1999: 36). *Anavatapta Gatha*, forming part of several Gandhāra manuscripts, was a popular text in Gandhāra. It is also mentioned in Māhāsānghika Vinaya. The *Jātaka* themselves provide evidence that they were formally written down by experts and taught by a teacher.

This sub-section asserts that jataka stories as revealed from Gandhāra relief and literary sources taught the Buddhist values, i.e., gratitude towards parents, love, kindness and compassion, to laymen. The major objective of this study is to critically analyze the morality in Gandhāra *Jātaka* in terms of different classical eastern, western and modern social theories.

(i) The archaeological evidence: *Dipankara, Viśvantara, Mahasattva, Śyama-Amara, Maitryakanyaka* (Ingholt 1957: 30, 48 & 49, ill. 2 & 3), *Chaddanta (Saddanta), Mahumagga (Amaradevipanha) Isismgiya-katekan, Rishyasringa* , and 'the Scene of *Rishyasring's Birth' Jatakas* are reported from Taxila, Dir, Sehri Bahlol, Andan Dheri, Chatpat, Timargarha, Gumbatuna, Bajaur in the region of Greater Gandhāra. Marshall (1960: 56-57) reported an unidentified *Jātaka* from Block E, Sirkap, Taxila (pl. 222, no. 135), now placed in Taxila Museum. It represents the oldest pictorial relief of Gandhāra, belonging to late Śaka period. The relief shows a young anchorite in the foreground, suspended head downwards on a pole, carried by two young men. Five other anchorites are looking on from the back ground. One on the left holds a flask in his left hand. All have the right hand upraised in front of them. The Gandhāra relief from Swat, representing story of King Śivi, showing self-sacrifice of King Śivi is now placed in British Museum. The story possibly took its inception from the one told in *Mahabharata.III.197* (Dames & Joyce 1913:17; Dutt 1984a: xviii). *Dipankara Jātaka* (Bell 2000**:** 37; Nagar 1993: 105) reveals a young ascetic named Sumati buying lotuses from the girl. Sumati prostrates and spread his hair on the ground so that the Buddha would not soil his feet. Most frequent illustrations show Sumati throwing himself on his hands and feet to cover with his hair the mud on the road for the Buddha to walk on (see Pl. 31a). Five panels from circular base of the Sikri stupa in Taxila exhibited *Dipankara Jataka*, belonging to Kushan period. It is now placed in Lahore Museum, Pakistan (Marshall 1960 pl. 49). It reveals the Dipankara Buddha in robes, *ushniṣa* and halo, attended by a *bhikshu*.

The young Sumati is repeated four times in front of the Dipankara Buddha. Another example exhibits a narrow and fragmentary frieze of phyllite from Dharmarajika stupa, Taxila. It reveals the king in hunting dress drawing his bow and an attendant in the background holding a quiver full of arrows. The background shows rocks, vegetation and lion's head coming out of a cave. Śyāma is shown sinking to the ground with an arrow in his breast, beyond the rocks. The next scene reveals the god Indra, haloed, floating in air, with a flask of ambrosia in his hand, and reviving the boy to life. The reviving Śyāma raises his hands above his head. The king is repeated twice on left of the frieze; first visiting the blind parents of the boy in their leafy huts, and second leading them to the scene of the miracle (Marshall 1960 81-82). Another one in schist, possibly a stair riser, presently placed in Berlin Museum (I 5964), is of typical Gandhāra execution from Kushan period. Six other stelea are reported from Shotorak, the western edge of greater Gandhāra, dated to 6th *c.* CE (Bell 2000: 38). *Śyama Jataka,* reported from Dharmarajika stupa is now placed in Taxila Museum (Marshall 1960 pl. 73: fig. 106).

***Chaddanta* (Saddanta) *Jātaka* was found from Goli and Karamar in Gandhāra. The stair riser specimen from Karamar represents the jataka in three scenes, now placed in Lahore Museum (no.1156). In first scene the six tusked elephant king stands over the pit. The hunter has his bow and arrow ready to shoot. In second scene the elephant is kneeling before hunter who is cutting his tusks. In third scene, the hunter is presenting the tusks to a male (Bell 2000: 37; Ingholt 1957: 50). *Mahaumagga (Amaradevi-panha) Jataka* is the largest Pali Jataka, referring to four pretended wisemen and Mahosadha, the Boddhisattva. The jataka is reported from Sahri Bahlol in Gandhāra. It has many versions, variously named as *Yava-Majhakiya, Upakosa* (Bell 2000: 36-7). *Maitrakanyaka Jataka* is represented twice in Gandhāra. Presently two fragments (no. PM 2714 & 2715) dated to *ca*. AD 300-400, are preserved in Peshawar Museum (Ingholt 1957). It narrates Maitrakanyaka killing his mother and years later has flaming wheel on his head as punishment. He prayed for all those who had sinned. This noble act saved him for his fortune. In *Nalinika* (also known as *Isisinga, Alambusa, Isisrnga, Rşyasrnga,* the Deer Mother, Deer Queen Mother) *Jataka* (Nagar 1993: 106), a doe, enamored of an ascetic (*boddhisatva*), eats grass with his urine and gives birth to a full grown male.**

1 ***(ii) The Literary Evidence of Gandhāra Jātaka:*** The literary traditions of *Anavatapta Gatha* and Aśvaghoṣa's Sūtralamkara were originated and evolved in Gandhāra. We find the literary evidence of Gandhāra *Jātaka* from rich and varied

traditions of Asvaghosa's *Sūtralamkara*; a collection of pious legends after the model of *Jātaka* and *Avadana* (Hamilton 1950: 149). The Aśvaghoṣa's *Sūtralamkara* although mentions other parts of the subcontinent, but its main emphasis is on Northwestern Provinces, i.e., *Avanti, Ashmaka,* Gandhāra and *Pushkalavati*. Story 39 of the *Sūtralamkara* narrates Kingdom of *Siu-ho-to,* where King Śivi purchased dove at the price of his own flesh, which according to Aurel Stein corresponds to the modern Buner (Nariman 1992: 195). The vast and deep impact of Gandhāra *Jātaka* on common masses could be gleaned through chronicles of the Chinese pilgrim who visited Gandhāra in first few centuries of the Christian era. I-Ching maintained that Aśvaghoṣa's *Sūtralamkara* was studied everywhere in the Land of Five Indies as well as in the Southern Seas (Indo-Asia) (Hastings & Johns *n.d.*: 494). It was a common understanding that to read Aśvaghoṣa was to be at once educated, instructed and delighted. Telling the stories to achieve moral gains is still alive in ethnic cultures living along the Silk Route of Pakistan.

Aryasutra's Jatakamala related to the Mahayana Buddhism. The fragments of Aryasutra's Jatakamala were found from Schoyan manuscript, in Bamiyan valley; part of the ancient kingdom of Gandhāra in north-east Afghanistan. Though Aryasutra's Jatakamala contains 34 *Jātaka*, the fragmentary collection of Shoyan manuscript preserves only seven, in the five manuscripts written on birch bark in Gilgit/Bamiyan Type II, dated to 6^{th}-7^{th} centuries CE (Braarvig & Fredrik 2010: 84-84). The *Jātaka* include *śreshi* and *Aviṣahyaśreṣṭhijataka* (two stories of the Buddha as the head of a guild), *Vyāghrījataka* (giving his flesh to a tigress), *Maitribalajataka* (as the generous king Maitribala), *Śarabhajataka* (as a deer), *Aviṣahyaśreṣthijataka, Śibijataka* (as the king of Śibis), and *Viśvaṃtarāvadāna* (as the prince Viśvaṃtarā). Gilgit manuscript is another literary source of Gandhāra *Jātaka* stories (Dutt 1984b: xviii).

The *Jātaka* played a significant role in propagation of Buddhism to common masses through Gandhāra relief and probably also through Buddhist monks and wandering *kathaks* or professional story tellers, who were also among major propagators of jataka tradition. The word '*kathak*' has originated from *Sanskrit* '*katha*' or story. Gour (1929: 47-48) maintained that *kathaks* were same to

uneducated masses as were the missionary monks to educated lot. They moved from town to town, and attracted a wide audience by dancing and singing the *Jātaka* (Hamilton 1950: 149; Mills, Peter & Sarah 2003: 331). The *Jātaka* spread throughout Asia *via* channel of Buddhist missionaries. The translation activities in first few centuries of Christian Era in China transferred the carving and painting tradition of Gandhāra *Jātaka*. Binyang Cave 6 at Longmen, China (7th *c.* CE) presents a detailed description of *Mahasattva* and *Viśvantara Jātaka*. The *Viśvantara Jataka* and *Mahasattva Jataka* is variously described in Māhayāna scriptures like, *Suvarnaprabhāsa* chapter 8*, Vyāgrhiparivarta; Jātakamāla.*1*;* *Avadānakalpalata*.51.vv. Pilgrims Songyun and Huisheng described Uḍḍiyāna as a commemorating place of *Mahasattva Jātaka* and Prince Suddana or *Viśvantara Jātaka*. They identified the spot where *Mahasattva* sacrificed himself to the tigress, and the stupa of bones, to southeast of the capital of Uḍḍiyāna and Mount *Dentaloka*, southwest of the capital. They also saw Prince Suddana's thatched cottage, the tree around which the children ran to escape, and the cave of five hundred years old monk Acyuta. Both stories highlighted the Buddhist concept of limitless compassion and generosity. The *Jātaka* reveal giving of one's own life a way to attain *boddhisattvahood* (Ch'en 1973: 176; Mc Nair 2007: 45, 49). According to *Prajna* text the first step to Path of *bodhisattvahood* consists of one's altruistic tendency (*adhyāśaya*) and readiness to give away even one's own life for the sake of saving other living beings (Leningard 1932: 34).

2 ***(iii) A critical analysis of the morality in Gandhāra jātaka:*** The Buddhist ethics revolve around generosity, morality, ethical thought and benefit for others. According to Solomon **(**1985: 462) morality is the core of ethics. Ethics refer to the moral behavior and moral principles, leading to peace without oppression in society. Aristotle virtue ethics focus on modification of character traits through moral principles (Bunnary 2004: 3). The word 'ethics' comes from the Greek word '*ethos*'. Ethics emphasize the good and bad, right or wrong human character traits. The western theories refer to morality and ethics in terms of virtue and duty. Aristotelian virtue ethics maintains that happiness is the consequence of exercise of virtue. According to Immanuel Kant's deontological ethics, it is about duty which may not make us happy but it is valuable. Karunadas**a** (1994: 3) maintained that an individual's psychological dispositions

have a direct influence on society in which he or she lives. Thus moral and ethical dispositions reduce violence and increase peace in the society. The following section elaborates love, kindness and gratitude towards parents, sacrifice and generosity as preferred examples of Buddhist morality in Gandhāra *Jātaka*. It critically analyzes the eastern and western ethical philosophies for their moral messages. It also attempts to pinpoint the converging themes across the philosophies.

The *Śyama Jātaka* (see Pl. 35a) reveals the story of Śyama's love and adoration for his blind parents. According to the narrative, in one of his previous births, the future Buddha was born as Śyama who was a model of filial piety. His old and blind parents lived as hermits in a remote part of the Himalayas. Śyama was their sole support. One day when Śyama went to a pool to fetch water for his blind parents, he was struck by an arrow of the king of Benarus, who came there hunting deer in the forest. Indra was deeply impressed by Śyama's filial piety and restored him to life (Joshi & Banerjee 1998: 180). Historically we find the evidence of popularity of the *Śyama Jātaka* in Gandhāra from Huan Tsang's narratives, who reported a stupa about ten miles from Pushkalavati (Charsadda), believed to mark the site of the *Śyama Jātaka* (Grey 1994; Joshi & Banerjee 1998: 179; Nagar 1993). The filial piety, as narrated in *Śyama Jātaka* directly corresponds to the teachings in pure Buddhist Sutras, for instance, *Mangala-sutta*. It refers to the meritorious act of repaying one's parents for the tremendous love they devoted to their children (Hallisey *n.d*.).

Filial piety remained a basis of eastern and western ethical philosophies; especially it forms firm foundations of the Chinese morality. Confucianism considers the filial piety as a prime virtue and the basis of all human relations (Che'n 1908). It leads to integration of family; a basic unit of a peaceful society and a well-controlled country. According to Confucius 'Analects of Filial Piety' and 'Confucian Teachings', filial piety is the root of humanity and basis of moral law and order in the society (Rosemont, Henry & Ames 2009). Filial piety is a return to favours granted us throughout our lives by our parents (Brain 1998; Ebrey 1993). 'The Sutra on the Profundity of Filial Love', an apocryphal scripture[1]; reveals a deep impact of Confucian concept of filial piety. The sutra relates Buddha's sermons on ten types of

[1] though a Buddhist scripture, but originating in China,

kindnesses bestowed by mother to her child, i.e., providing protection and care while in her womb; bearing suffering during delivery; forgetting all pain once he or she is born; moving to a dry place and lying in the wet herself; suckling; washing away the unclean; always thinking of him or her when it has travelled far; deep care and devotion; and finally ultimate piety and sympathy. The sutra further relates that those human beings are ignorant who do not care about their parents. When children are un-filial, they may also ignore other social rules. Un-filial children may not aspire to learning and involve in fight and theft (Keiyo 2005).

Though the Greek political philosophies do not directly emphasize the filial piety, still these considered family as a basic unit for the smooth running of a democratic state. The Plutarch's 'The Lives of the Noble Grecians and Romans' refers to democracy to be set up in the family. According to Aristotle, the ancient Greek Polis or city states started in family groups. He referred to family as a model for organization of the State. Furthermore, Louis de Bonald considered family as a miniature state (Blum 2006: 22). Aristotle's in *Analects* maintains that filial piety is a lifelong attitude of respect towards seniors. According to Robert Oxnam filial piety derives from parent and child relationship, i.e., the most fundamental of the human relations. Irene Bloom maintained that the children should look after their parents in their old age, just as their parents had looked after the children in their infancy and childhood (Chan 1963).

Sacrifice, generosity and charity are other important moral values taught in the jataka stories. According to *Mahasattva Jātaka*, the prince while wandering in jungle along with his son saw a starving tigress and her cubs. In order to feed himself to the tigress he stripped off his clothes, hung them on Bamboo branches, and placed him before the tigress. He cut off his throat because tigress was too weak to eat him and threw himself from a high hill. The tigress left only his bones. The king, queen and brother of *bodhisattva* collected bones and raised 'Seven Jeweled Stupa' over them in the bamboo groove.

Viśvantara Jātaka (Nagar 1993: pl. 71) remained the most famous jataka in first few centuries of the present Era, in Gandhāra, and also in other parts of India and China. It emphasized the importance of *dāna* or charity and gift giving. *Viśvantara Jataka* relates the story of *bodhisattva* along with his wife Mandi, and two children.

The family travelled to Mount Dantaloka, while in exile. The story narrates that there was a king named Banjaya, in the kingdom of Śivi. He had a son named Viśvantara, who became very famous due to his generosity. Viśvantara tried to give charity and gifts to anyone who appreciated him. He even gave away his auspicious white elephant, the harbinger of rain in the State. People were angry with him. They wanted to punish him. His royal father ordered him to go and live in a forest with his wife and two children. In the forest, he gave away his horse, then chariot. He gave his two sons to a Brahmin, and last his wife. Indra finally re-united him with his children, wife and sons. The story relates that supreme sacrifice leads to supreme knowledge. While Viśvantara was in forest there was a perfect harmony among animals and beasts of the jungle, due to his benevolent presence ((Joshi & Banerjee 1998: 179). Viśvantara personifies the highest virtue of sacrifice, renunciation and equanimity to fulfill *dāna paramita*.

The virtue of generosity was a predominant thought in eastern and western traditions. In a wider context generosity may refer to hospitality, liberality, love and charity. However, specifically, it refers to the virtue of giving good things to others freely and abundantly.

The Buddhist scripture, i.e., *Milindapañha*, the Nagarjuna's *Ratnavali*, and *Buddhacarita II,* elaborated at length the *dāna paramita* as an act of merit in this life, as the destruction of ignorance and the attainment of the highest learning, fame in the society, etc. and the final salvation in hereafter (Elverskog 2010: 20; Johnston 2000: 22; Walser 2005: 152-153). Such promotion of the act of *dāna paramita* must have resulted in a spirit of giving to the poor, as well as to Dharma. We find ample literary, palaeographic and iconographic evidence for generosity towards the monastic order. For instance, two relief from Butkara I show princely donors (Swāti 1997: pls.65 & 66), and three relief panels from Shnaisha showing the officials receiving donations from devotees (Swāti 1997: pls. 230, 231, & 238). Furthermore, Konow (1929: 79, 145, 157, 162, & 165) refers to a number of inscriptions revealing the donations of water tanks, dam, wells dug and rooms made in honour of deceased mother/father, husband/wife, etc. (Swati & Alia 2013: 32-34). We still find the tradition of copious donations to the Muslim tombs, and building rooms for the salvation of deceased relatives in different parts of modern Pakistan (ancient Gandhāra).

According to Aristotle's ethical doctrine (Aristotle Nicomachean Ethics *n.d*.) '...generosity is a means between excess of wastefulness and deficiency of stinginess' (Nic Ethics 116). Generosity is the third virtue in Nicomachean Ethics; the first two being bravery and temperance to live a virtuous life. A generous man gives to a right person, the right amounts and at the right time. *Dāna* or charity shows ethical behavior in mutual help. Giving reduces poverty, criminal act and violence in society, thus improving living standards of the members of society. *Cakkavattisihanada-sutta* from the *Dighanikaya* maintains that poverty is the cause of crime, violence, robbery and hatred (Bunnary 2004).

According to the modern psycho-social theories, generosity is a personal moral orientation to life. Darwin (1871) was of the opinion that altruism allowed humans to evolve in groups, cooperating for mutual survival. One can reject a number of moral vices, e.g., selfishness, greed, fear and meanness, with help of generosity. The social scientists and modern psychologists are of the opinion that the social norm of giving eliminates social problems. Generosity, as a social good has a number of emotional benefits. Aknin, Barington-Leigh Dunn, *et al* (2010) study conducted in diverse economic and cultural contexts revealed that pro-social spending makes people happy. They asserted that generosity is a fundamental feature of human life. It creates large scale social cooperation. Lyubonirsky, Sheldon & Schkade (2005) maintained that people are emotionally rewarded for helping others. The emotional rewards result in pro-social behavior.

An attempt has been made in the present sub-section to bring forth the moral education of Gandhāra *Jātaka*. We summarized archaeological and literary evidence of Gandhāra jataka. Though Gandhāra jataka have been reported and analysed by eminent scholars, but the moral significance of Gandhāra jataka have not been properly attended so far. We have made a point here, that the representation of jataka is few in Gandhāra, but significant. They contain important messages in Gandhāra iconography in terms of their morality and moral education to common masses. An effort has also been made to critically analyse the moral messages of love and kindness towards parents, sacrifice for others and generosity. The above mentioned virtues were compared among Buddhist, Chinese and Greek ethical philosophies. Though eastern and western philosophies somewhat differ in their content, yet contain

similar messages for society. Family is the basic unit of a society. Gratitude towards parents creates a reverential association among family members, resulting in a peaceful environment, eventually leading to harmony in a society. Similarly sacrifice for others and generosity results in a benign bond among members of a society. It creates cooperation, happiness and ultimately brings peace in the society. We strongly recommend to acknowledge Gandhāra jatāka as a National and cultural repository and to translate them in National and regional languages. It is also commendable to promote these stories through print and electronic media to appreciate their potent implications on reducing violence and increasing peace in the society.

4.7 The medical system in Gandhāra[1]: **The Buddhist philosophy and practice was strongly involved in medical theory and practice, since its inception (Ratanakul 2004: 2).The roots of Buddhist medical system probably go back to *Vedic* medical treatises. The *Vedic* treatises rank medicines as *UpaVeda* or 'later revelations form Heavens'. *Atreya Samhita* probably survives from Taxila University (Agarwal & Lalit *n.d*). The Páńini Ashtadiyāyi also throws light on a developed medical system at his time (Vassiliades 2000: 14). The *Ayurveda* leans heavily on the philosophies of *Samkhya, Yoge* and *Vaiśeska* (Scharfe 2002: 22-23; White 2004: 21). The *Ayurvedic* philosophy holds that disease is caused by an imbalance of homeostatic and immune mechanisms related to three physiological principles of *doshas*[2]. Nonetheless *Ayurveda* focuses on the metabolic functions, particularly the digestion (White 2004: 21).**

The Buddhists adopted the earlier concepts of *Ayurveda*. The Buddhist Canonical literature variously refers to medicines and the surgery. Buddha is frequently addressed as a *Mahabhisaga*, i.e., the Great Physician in the Buddhist literature. The Chinese accounts reveal that the Buddhist *Sangha* was deeply concerned with the human suffering and illness and a significant growth of the medicines took place in the Buddhist monasteries (Verma 2005: 142). The *Jātaka* emphasize the importance attending the sick (Hiri *Jātaka*. 363). The *Vināya* mentions that Buddha allowed the monks to use roots of turmeric and ginger, some roots were allowed to be powdered; ashes of burnt rice for constipation; leaves, fruits, the astringent decoctions, various kinds of gums and salts

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[2] **i.e., *Vatta Dosha*-wind force-*vatta* represents fluid and motion, circulation and neuro-muscular activity, *Pitta Dosha*-sun force-*Pitta* directs all metabolic activities, energy exchange, and digestion, *Kapha Dosha*-moon force,-*Kapha* represents structure, cohesion and fluid balance, pointing towards respiratory diseases, diabetes, athero sclerosis and tumors.**

were allowed to be used to cure boils, scabs, and ill-smelling. Different kinds of oils were used for headache. The eye ointments are also mentioned in the *Vināya*. It also mentions grinding stones, pestle and mortar for making medicines (Erdemir 2003; Chattopadhayaya 1977: 330).

We find a developed medical practice in Gandhāra at pre-Buddhist period. For instance, the surgical instruments from the Marshall's excavation of the city of Taxila, dated to 3rd *c.* BCE, even before the invasion of Alexander (see Pl. 23a). The surgical instruments included decapitators, probes and spatula. These were made of pure copper and revealed high quality smelting (Naqvi 2003: 91). Out of the total six decapitators, two were excavated from Bhir Mound (3rd *c.* BCE). The literature supports the archaeological evidence. *Suśruta Samhita* devotes a full chapter to the management of the obstructed labor, and describes about one hundred and twenty one blunt and sharp instruments. The decapitators were used in obstetrics in Asia and Europe till the mid of 20th *c.* CE. The pointed probes, all found from Sirkap, were used for several surgical uses. Marshall catalogues three needles under surgical instruments, possibly used for suturing wounds (Chaturvedi 1985: 86).

The medical knowledge was further developed after Sassanid and Macedonian invasions in Gandhāra. Burzoy, the physician and vizier of Khusrau Anushirvan took back the *Ayurvedic* medical texts and translated it into Pahlavi (Agarwal & Lalit *n.d*; Nagamia 2003: 26; Vassiliades 2000: 22). The Greek chronicles refer to the developed medicines in Gandhāra. Nearchus, as reported by Arrian narrated that Alexander collected around him the *vaidya* who were most skilled in the art of healing, especially the snake bites and the body pains (Chaturvedi 1985: 89; Mc Crindle 1984: 94). Hippocrates describes the pepper and mouthwashes of the Alexander's India. The *pepper indicum* was transported to the Greek world, where the physicians used it as an ingredient for pessaries (Majno 1975: 270).

Jivaka studied medicines for seven years at Taxila University, and then carried out an extensive practical work. The Tibetan accounts relate that the free medical services of Jivaka to the *Sangha* attracted many converts. Jivaka is the most celebrated figure in Chinese, Tibetan and Thai medical lore. He transferred the Indian medicines to China and was referred as 'medical king'. The Chinese surgical techniques, such as laporatomy (removal of abdominal walls), trepanation (surgery of skull) and removal of cataracts were influenced by the descriptions of the Jivaka surgical methods (Majumdar 1953: 588). Ch'en (1973: 483) mentions that some of the surgical practices of Hua T'o of Han Dynasty, the 'Father of the Chinese Medicines', were probably taken from Jivaka's

operations mentioned in the *An Shih-kao* (2nd *c.* CE) and the Chinese translation of the 'Deeds of Jivaka'. According to Thai Mōbāran the medicine was handed to the Thais by Jivaka (Jung 2001). Jivaka plays a major role in the cult of healing of Thailand till today. The *Ayurveda* also owe much to the healingpractices traditionally associated with Jivaka (Bakhshi & Lipi 2000: 159; Grimm 2000: 99; Haidav 2003: 245; Sach 2001: 75; Salguero 2008: 185, 4; Salguero *n.d.*). The Gandhāra relief also reflects the Jivaka unprecedent medical and surgical skills. The relief entitled as 'Jyotishka Saved from the Pyre' represents the Jivaka having delivered the baby alive from womb of a dead mother, and presenting it to the king of Bimbisara (Ingholt 1957: 85).

***Milindapañha* is probably the first Gandhāra Buddhist scripture that uses the analogy of medicines with a deep knowledge into the details of medical sciences and the training of doctors. The Aśvaghoṣa's works frequently refer to the well advanced surgery at his times. We find metaphors in *Saundarananda* where he refers to the jaws of forceps helping the surgeons to pull out sharp splinter lodged in delicate portions of the body (Chattopadhyaya 1977: 338; Verma 2005: 141).**

The *Caraka Samhita,* Bhela and Suśruta Samhita were based on the teachings of Atreya Samhita; a teacher of famous Jivaka, who lived and worked at Taxila in about 8th-7th *c.* CE. The writings of Atreya were taken to China in middle of 2nd *c.* CE (Mookerji 2003: 319; Scharfe 2002: 21; Shankardass 2002: 28). The oldest extant *Samhita* is generally ascribed to Caraka. The Chinese Canon translated by Sylvian Levi maintains that Caraka was the court physician of Kaniśka. Suśruta is also ascribed to Caraka. The Bower manuscript also name Caraka as Atreya and Harita. The original copy of the *Caraka Samhita* is not extent. However, a revised version of the Samhita called as *Uttara-vastu-siddhi-sthāna* was written down by the Kaśmirian Drdhabhala or Drdhavala in 8th-9th *c.* CE. Drdhavala included seventeen chapters to the existing *Caraka Samhita*. Drdhavala also wrote down *Caraka Pariśista* and *Cakrapāni*. Drdhavala was a native of *Panchnanadapura* (the land of five rivers). *Panchnanadapura* has variously been located at Punjab or Kaśmir. The city is identified with Punjab by Dr. U.C.Dutt in his *Metria Medica*. His interpretation has been accepted by Dr. Cordier, who mentions Panjpur, north of the city of Attock in Punjab as possible candidtate of Drdhavala's birth place. However Dr. Heornle locates *Panchnanadapura*at (meaning 'five channels') in Kaśmir. Many parts of *Caraka Samhita* refer to Kaśmir, i.e., *Kaśmira-patha*. The third chapter of the sixth section according to especially refers to Kaśmir (Kapoor 2003: 241, 490).

The discussions and the conferences formed basis of knowledge in *Caraka Samhita.* The discussions increased zeal for knowledge (*samharsa*), clarified knowledge, increased the power of speech and removed the doubts. *Caraka*.I.$_{26}$, mentioned a high level medical conference held in the *Caitraratha* forest. The conference was attended by Atreya, Bhadrakāpya, Śakuntaya, Purnāksa, Maudgalya, Hiranyāksa, Kausika, Kumaraśirās Bharadvaja, Vāryovida, the Vaideha King Nimi, Badiśa and Kānkāyana the physician of Balkh, for the purpose of discussing the question of food and taste (Chaturvedi 1985: 88; Kapoor 2003: 414).

***Caraka Samhita* also maintained general principles for a healthy living[1] (Kapoor 2003: 480). It also deals with such topics as eight principal diseases, diet, remedies, pathology, anatomy and embryology, etc. *Caraka Samhita* maintained that the cow herds, shepherds and goat herds and who else lives in the forest know the herbs by name and form. It recorded over 340 drugs of vegetal origin. Caraka was variously referred to in the Chinese literature; and later in the Medieval European medical works. The book has also been translated into Persian and Arabic (Scharfe 2002: 22; Trivedi, Garima and Seema 2006: 236; Trivedi 2006).**

The *Suśruta Samhita* deals with pathology, anatomy, embryology, therapeutics and toxicology, as well as the surgical instruments and mode of operation. The operations were performed on wax spread over a board, or on stems of plants (Kapoor 2003: 173).

Some medical works are also attributed to Nāgarjūna. The historical accounts of Sui Dynasty indicate the translations of Nāgarjūna's prescriptions. *Yogesaka,* a medical compendium in one hundred stanzas is ascribed to Nāgarjūna. The compendium was extremely popular in China. It embodied the medical principles of *Caraka Samhita, Bhela* and *Suśruta Samhita*. The name of Nāgarjūna is mentioned with two other physicians, i.e., Jivaka and Brahma (Reddy 2002: 317; Shankardass 2002: 291). Nāgarjūna was revered as an eye specialist in China. Nāgarjūna was synonymous with *Eye-Sight boddhisattva,* i.e., *Lonshu* in China. The general eye specialists in China have long been called as *longshu* after Nāgarjūna. The *Prajna* texts and *Mahavaipulya maahasamnipata sūtra* of Nāgarjūna contain instruction about healthy practice of applying sandal wood paste and other perfumes on human body, giving way to the Chinese *Xiangyao* (fragrant medicines) (Devahuti 2002: 163).

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[1] A person should use umbrellas, sticks, turbans, and shoes. One should not climb on a bad vehicle, or lie on a bed without sheets or pillows, should not bath in a fast flowing river, one should not laugh loudly, or yawn without covering ones face, or pick one's teeth, referring to a healthy and successful life of a good citizen

The Buddhist scriptures used physiology and embroyology allegory to explain the religious precepts. *Milindapañha* uses the analogy of medicines with a deep knowledge into the details of medical sciences, the training of doctors, etc. (Chattopadhyaya 1977: 338). *Milindapañha* and *Sūrangama Sūtra* described the five stages of formation of foetus[1]. *Visuddhi-magga* described the number of bones, framed by the joints; tendons and an outside envelop covered by an epiderm full of pores (Deshpande 2001: 1079; Lanman 1922: 148, 298; White 2004: 52; 94). Lotus Sūtra uses the parable of medicinal herbs, where a variety of medicinal herbs, plants and trees are described. The rain from one blanket of cloud accords with the nature of each species. The species grow in same soil, but they possess different characteristics (Watson 1993: 198).

Acupuncture is generally regarded as an indeginous Chinese system of healing. However, I-Ching mentioned that it was practiced in the Western regions (India) as early as 1st *c.* CE, long before its formal introduction in China (Chaudhuri 2008: 9).

4.7.1 Vināya and health education: ***Vināya*** **elaborates the details of a healthy life, e.g., clothing, sitting postures and manners of eating, etc. The ettiquette and eating habits in the dining hall were indispensable of *Vināya*. According to *Mahaparinirvana Sutta* food should be prepared with three virtues, i.e., soft, clean and correctly prepared, and six tastes, bitter, sour, sweet, spicy, salty and mild. According to *Vimalakirti nirdeśa sūtra*, the food prepared by one who is endowed with wisdom and liberation never exhausts (Ch'en 1973: 384). A large part of Four-Part-*Vināya* deals with food and proper behavior at meal time. The ideal monk was restrained and moderate in food and easily satiated because of a light stomach. The leftovers of the food were to be eaten in order to get inexhaustible merits (Sarao 2002: 88; Watson 1997: 116).**

After food was served the monk was to meditate on five elements[2], for eating without meditation inhibited the proper digestion. The Four-Part-*Vināya* enumerates five[3] and Eight-Section-*Vināya* enumerates ten benefits[4] of eating porridge. According to later

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[1] i.e., *Kalala-slippery* coagulation, the first week of embryo; *arbuda*- a mass during second week; *peśt*-a piece of soft flesh during third week; *Ghana*-solid lump during fourth week; and foetus with organs during the fifth week of its life.

[2] 1) the effort necessary to supply the food and to appreciate its origin; 2) to refect on one's virtue being insufficient to receive the offering; 3) to protect the mind's integrity to depart from error, and to avoid the greediness; 4) to consider the food as medicine, preventing emaciation; 5) and to take food necessary for Enlightenment.

[3] i.e., overnight digestion, reduced flatulence, the quenching of thirst, the supression of hunger

[4] i.e., appearance, strength, mental happiness, longevity, clear pronounciation, eloquence, overnight digestion, reduced flatulence, the quenching of thirst and suppression of hunger

Buddha took porridge shortly after attaining Enlightenemnt, thus indicating the power of porridge. Huan Tsang described that the *bhikkhus* were ordered to use willow twigs as soon as food was over to clean their teeth. The *Vināya* relates five advantages of using and five disadvantages of not using the tooth sticks[1]. The monks should have a wash before every meal (Bakhshi & Lipi 2000:125; Williams 2009: 542; Watters 1904: 131, 152; Yifa 2002: 69).

The researcher visited Qixia Temple, Nanking, China to study the contemporary monastic ractices. The dinning hall practices were similar to the old *Vināya* rules. The rules for the timings, entering and leaving the hall, serving the food, accepting the food, the placing and stacking of the utensils were strictly followed. Before every meal a monk gave a short talk on the health benefits of porridge. It is said that Buddha used to talk on benefits of porridge before meals. A short meditation followed the lecture. The researcher personally experienced the benefits of a praying before the meals. It developed a calm state of mind which in turn helped in satiation for long hours even if a small amount of the food was consumed (see Pl. 23b).

The palaeographic evidence supports the literary evidence. The Bower manuscript from the memorial stupa at Qum Tura in Kingoi (Kashgar, near Kuchar) contains *Caraka Samhita* and *Suśruta Samhitas Navarutaka* (4thc. CE) showing the medical formulae. It was probably brought from Gandhāra, Uḍḍiyāna, Bamiyan or Kaśmir. It includes recipes for making powders, decoctions and elixirs; and also narrates the childrens' diseases and the formulae for the snake charming (Rhys 1999: 124; Rhie 2002a: 593). It emphasizes on importance of ginger and also deals with garlic (*laśuna*) and its valuable qualities for prolonging life. It discusses eye washes. The treatises[2] were written in Prakrit. Part I and II are medical, IV and V are on *Pāśakakevali,* i.e., cubemancy and VI and VII *Mahāmāyuri Vidyārājni,* i.e., a charm against the snake bite (Kapoor 2003: 181).

The first forteen pages of the *MūlasarvāstivādaVināya* of Gilgit manuscript contained the information on medicines, but more important portions on *avadanas* dealing with the medicines were missing (Dutt 1984a: 3; Jettmar 1990). *Bhaisyaguru Sūtra* forms part of

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[1]i.e., bad for eyes; mouth becomes bad smelled; the passages by which the flavor of the food passes are not pure; bile and phlegm get into the food; the food does not taste well to him who does not use the toothsticks.The use of toothstick balanced the body temperature and sharpened the gustatory abilities.

[2]The treatises included *Anpacchāndāsike, Śārdulavikridita, Suvadana, prthvi, Vancasthavila, Manndaucrinta, Pramaniici, Pramitāksarā, Totoka, Sragdharā, Sudhā, Mālini, Śālini, Mathamayura, Kusumi-talatāvattata.*

Gilgit manuscript. The Cult of Healing Buddha seems to have gained popularity in China and Far East after the Huan Tsang's translation of *Bhaisajyaguru vaiduryaprabhasapurva pranidhana-visesavisataram sūtra* (Master of Lapis Lazuli Radiance Tathgatha[1]) (Śankarnarayan 1999: 26). The *sūtra* relates the healing mantra. *Bhaisajyaguru* is the medicine Buddha. In Gandhāra relief he is shown as seated in a full lotus posture and carrying a bowl of medicines in his left hand. Later, he served as the patron saint of medicines in Tibet (Williams 1989: 235).

The Buddhist monks coming from Gandhāra translated the *Ayurvedic* works into Chinese in 400 CE. Fa Hien and Huan Tsang carried back valuable information on medicinal plants, methods of treatment and organization of the free hospitals and dispensaries to China (Deshpande 2001: 1079; Erdemir 2003; Young 1999).

4.8 The Gandhāra monasteries and sponsorship of the indigenous craftsmanship: **The sub-section details the Gandhāra craftsmanship as an informal means of education. Architecture was considered a sacred craft since *Vedic* period onwards. A well organised and closely supervised institution must have been responsible for huge building projects of Gandhāra monasteries (Dr. Mohammad Farooq Swati, personal communication). The section highlights that the Gandhāran architecture was exemplary in terms of its landscaping, layout, choice of material and effective ventilation, lighting, drainage, and hydrology—aqueducts and cisterns, the structural stability and the rules for health and privacy. The great refinement in masonry techniques, building techniques, plastering, architectural decoration and painting bespeak of the refined and widespread craftsmanship throughout Gandhāra (Faccena 1995:101; Faccena, Ahmad Nabi Khan and Ihsan H Nadiem 1993:90; Foucher 1915:3 Hargreaves 1914b:30; IsMEO 1980:215; Marshall 1918: 27, 1936:172; Olivieri 2009: 265; Rahman 1993: 110; Spagnesi 2006:161; Stein 1915:109;).**

The Buddhist texts refer to the creative arts, craftsmanship, scribing and similar fields of knowledge. The craftsmanship was attained through informal apprenticeship. The highest degree of excellence, observed in the Gandhāran stupa and monastery architecture, indicates the highest professional skills of the architects, craftsmen and artists. The archaeological evidence suggests that Gandhāra monasteries patronized the architectural, metal working, woodwork and pottery craftsmanship. The *Jātaka* further elaborate these skills. Rhys (1999: 74) describes eighteen types of craftsmanship at Buddhist Period. The craftsmanship was either hereditary or 'acquired'.

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[1] Lapilazuli has healing powers in the Buddhist medical system.

Apprenticeship was required with a master or with a recognized member of the craftsmen's guilds (Winternitz 1977: 65). The craftsmanship could also be judged from Gandhāra bronzes, which, although rare, reveal the best techniques in wax preparation (*cure perdue*) and casting techniques in the 7th *c.* CE (Dar 2007:51; Giri 1927-31; Faccena & Giorgio 1962; Spooner 1912; Siddique 1937; 1940; Marshall 1931; 1951; Wallace 2001:44; Wiegand & Donald 1994:165). Furthermore, the making of the glazed bricks and the glass tiles had reached to the highest mark. The glass tiles executed in different colours were recovered from the early twentieth *c.* excavations at Dharmarājika, Taxila and Sahr-i- Bahlol. The presence of variegated glass tiles supports the Chinese tradition that glass making was introduced to China from Northern India (Marshall 1916:18; 1915:112; Spooner 1914:55; Swāti 1997:249 f.).

The craftsmen specializations were developed in Gandhāra since *Vedic* Period[1]. Rigveda mentions carpenters (*takshan*), metal workers (*karmara*), gold smiths (*hiranyakra*), the tanners working in leather, weavers, sewing and plating of mats from grass. The *Jātaka* further elaborate the list by describing the wood workers, stone workers, potters, ivory workers, garland makers, and painters. Kautilya Arthaśāstra deals at length with the craftsmen, like smiths and the artisans (Rangarajan 1992: 57; Rhys 1999: 74; Sen 1998: 47).

(i) The wood workers: **The earth and wood[2] was the most favoured architectural material in Gandhāra. The Greek chronicles mentioned that the carpenters were the most flourishing class when Alexander reached Taxila (Sen 1998: 127). The oldest specimen of written record found in Taxila Valley is an inscription of Aśoke that mentions a word '*Naggaruda*', meaning 'carpentry'-an Aramaic equivalent of the word *Takashasila*. According to Songyun the roof of *Shah-ji-ki Dheri* monastery was built of all kinds of wood (Beal 1884: civ; Foucher 1915). Huan Tsang described the double storeyed wooden pavilions and high corner towers in Gandhāra. The timber pillars were used to support the roof of the *virandahs* (Srinivasan 2009: 120). The archaeological evidence corroborates the literary evidence. The 1970-71 excavations of the Room No. 1 of**

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[1] The researcher ave maintained earlier that the intellectual legacy of Kuśan Period Gandhāra (1st-3rd *c.* CE) was a continuous process starting from *Vedic* Period (*ca.* 1500 BCE), or perhaps earlier. The earliest parts of *Rigveda,* some redactions of Mahābhārata were written along Indus basin; while Páńini *Ashtadiyāyi,* Kautilya *Arthaśāstra* were first written at University Centre of Taxila (8th *c.* BCE to Alexander's invasion in 3rd *c.* BCE).

[2] Wood is a fibrous material with a porous network structure. The wood logs owe their strength from their internal structure of longitudinal and radial fibers. These are not impaired by the long exposure (The New Encyclopedia Britannica 1995: 881). Moreover, these could be profusely painted and lacquered.

Manikyala monastery yielded gold and mica sheets of different shapes, possibly used to embellish the wooden fitting of the room (Dar 1970-71: 16).

Gandhāra relief provides details of the wooden architecture (see pl. 24b, 35a & b). Wood provided pillars, roof beams, door frames, doors and windows at Gandhāra monasteries. The parapets and the eaves were supported by a row of brackets. The doors were adorned with precise geometric and floral patterns. I-Ching reported that the well-off donated the paints of good quality, e.g., yellow, vermillion, azure, blue, green to the monasteries for painting wood (Dutt 1984a: viii). Huan Tsang refers to the profusely painted doors, windows, and low walls of the monasteries, and the ornamental monk cells (Behrenedt 2003: 34; Beal 1884: 110).

The Sikri Stupa, now placed in Peshawar Museum, reveals the best example of the wooden structures of Gandhāra. It reveals the door jambs, capitals, columns, niches, gabled roof, arches, cornices, balustrades, city gates, etc (Dar 1999/2000: 27). Swāti (1996: 248) is of the opinion that the wooden architecture presented by stone carvers of Bharut and Sāncī, were originally developed in Gandhāra during Achaemenid ascendency. The capitals, entablatures, and bases of columns, arches, doors and door jambs, shown in Uḍḍiyāna relief were continued in the area till early half of 20th *c.* CE.

Sometimes, the entire buildings were constructed of wood. For instance, Aurel Stein reported the stone walls that were no more than one or two feet high and neatly dressed at the top at Sahr-i-Bahlol (Stein 1915). They may represent the foundations for light constructed walls of timber, small dried bricks or wattle. The roofs of these light constructed walls were made of timber or wattle in all probability, as shown in the Gandhāra relief. These Gandhāra monasteries may have been similar to those of the Śri Lanka, Burma, Nepal or Tibet (Tissot 1993: 734).

(ii) The stone workers: **Dar (1984: 17) mentions that one meaning of Taxila is 'the city of dressed stones' or 'a city of *Takshana*' (*Tarkhana,* the carpenters). Taxila is even known today throughout the country for the craft of stone cutting, dressing, carving and sculpturing. The Gandhāra stone work could be divided into three categories, i.e., 1) relief, 2) stone objects, & 3), architecture. The stone objects could further be sub-divided into stone reliquaries and the objects of daily use. The stone workers could also be divided into several categories, i.e., the stone cutters, the carvers, the scribes who inscribed script on stone slabs and the sculptors. The Gandhāra relief manifest exceptional technical and compositional skills (Faccena 1999/2000: 46).**

The stone reliquaries reveal the stone worker's expertise (Abdul Samad 2009: 191; see pl. 24b). The circular marks on inside of the reliquaries suggest the use of an early type of lathe (Swāti 1997: 253). Chakladar (1987: 134) mentions that there were lathe in houses and other arrangements for turning at about 6th *c.* BCE in Pancala country, especially Taxila. Turning is still widely practiced in the modern craft markets of Taxila (see Pl. 25 b). A stonework market exists in the modern town of Taxila, on a road leading to Mansehra. The electrical lathe machines are used for preparing round objects (Pl. 26a). Possibly similar mechanical lathe machines were used since antiquity (Chakladar 1987: 134). The objects of daily use, funerary objects like grave stones and decoration pieces are prepared in this market; with a rare practice of preparing replicas of Gandhāra reliquaries and relief (see Pl. 26b). The modern sculptors use small chisels and engravers fitted with dentils of different sizes and shapes.

The researcher conducted an ethnographic study of the towns of Tibian and Julian lying close to numerous Buddhist monasteries at Taxila. The survey revealed that several traditional crafts are still practiced in these towns. About 75% of the population excercises stone cutting, sculpting, engraving and inscribing. The researcher interviewed the residents and found that their fore-fathers lived here for centuries and there were no migrations. The researcher suggests that the craftsmen may be indigenous residents of Taxila, possibly settled there for several centuries; nonetheless the matter is open to further ethnographic studies.

(iii) The architecture: **In absence of any direct clue on Gandhāran architectural treatise, the archaeological remains may serve as milestone in study and analysis of the architecture of Gandhāra monasteries. The Gandhāra architecture yields perfect proportions, the floral and geometrical patterns, the construction techniques, plastering, the system of measurements, and building materials of highest skills. The excellent masonry techniques and materials were used (Faccena, Ahmad Nabi Khan and Ihsan H. Nadiem 1993: 114; Havell 2004: 75).**

The Gandhara monasteries were located at ideal strategical and aesthetic places as instanced by Bhamala and Kalawan monasteries in Taxila valley (Marshall 1936: 152; Sharif 1986: 46). The mountain monasteries of Peshawar basin and Swat had massive foundations to increase their structural stability (Behrenedt 2003: 35). Saidu Sharif I revealed a complex system of substructions (Calleri 1989: 115). In Buner District the walls of the monasteries were built with large slabs, with interstices filled with small stones. At Munara near Kingalai room like structures were built under the stairs, thus enhancing the soundness and the durability of the stairs, perhaps used for transporting

heavy loads upto the monastery area. The soil conservation techniques were observed at Ramanrai Stupa complex. The solid walls were built at intervals all over the steep hills, to stop the soil erosion (Rehman, Khattak & Faiz-ur-Rehman1996: 50).

A great care was devoted to the draining of water from the Gandhara monasteries. The strongly built stone and brick underground drains were recovered at *Shah-ji-ki Dheri*, Mohra Moradu and Takht-i-Bahi (Hargreaves 1914 a & b; Marshall 1918: 27). Drains of various sizes laid down along different routes to discharge the water collected inside the Saidu Sharif monastery beyond its perimeter (Calleri 1989: 97; Calleri 2009). Rehman, Khattak & Faiz-ur-Rehman (1996) reported a well-planned drainage system in numerous monasteries of Buner District, e.g., Kafir Kot II (Malakpur). The covered drains were reported at Maula site.

The rules of health and privacy were of prime concern to the builders of the monasteries. In some monasteries, the privacy was secured by designing the doorways off-centre. Moreover, the doorways of the cells on one side were not placed directly opposite the doors of the cells on other side of the courtyard (Marshall 1936: 172; see fig. 1).

Plastering was another field of expertise shown in Gandhāra stupas and monasteries, especially in open air stupa structures. The grooves running along edge in the column, surface of cornices and coping projecting at different levels were designed to keep water flow smooth (Faccena, Ahmad Nabi Khan and Ihsan H. Nadiem 1993: 90). The subtle and refined materials with best adhesive and plastic qualities were chosen as the plaster made infiltration of water impossible. The plaster coating also acted as a support for pictorial decorations. Rehman, Khattak & Faiz-ur-Rehman (1996: 10) could detect the traces of lime plaster on the floor of Munara hills stupa site in District Buner. The plaster was found still adhering to the inner walls of the monk's cells in Badalpur monastery, Taxila (see Pl. 28a).

Though we observe a highly developed architectural engineering at Gandhāra, still we find little palaeographic evidence. For instance, an inscribed copper plate from the Sirsukh city of Taxila bears a Kharosṭhī inscription that reads as;

> **"*…..Sangharama is built through 'Rohinimitra' who (is) the overseer of the work in this sangharama*" (Dar 1984: 221).**

Furthermore, the bronze relic from *Shah-Ji-ki-Dheri* mentions the slave Agisala, as an overseer of works at Kaniśka's Vihara in the Sangharama of Mahesana (Swāti 1996:

10). The monk Ratnvaja, who studied at Kaśmir and Uḍḍiyāna, was a supervisor of several works at Bsam-yas monastery of Tibet in 8th *c.* CE.

The architecture of the Gandhāra monasteries successfully corresponded to the local environment. Marshall (1936: 157) mentioned that the stone flagged courtyard at Bhamala monastery (4th-5th *c.* CE) must have been covered with a deep layer of earth perhaps to prevent the radiation of the hot stones. The coloured tiles were used to prevent the glare. The modern research proved that lime plaster absorbs carbon dioxide, thus cleaning the inner environment from impurities. The trees were also planted around the monasteries, in order to provide shade and serenity, and also to purify the environment. The thick and bulky stone and wooden architecture of the Gandhāra monasteries must have yielded best insulation and the acoustic properties. The modern research recommends such materials for domestic and school buildings. It further highlights that the stone architecture absorbs the harmful shortwave sun radiations and radiates the long-wave radiations, useful for human health. The solid wooden structures were acoustic materials that absorbed the incident sound and reduced the sound pressure in the buildings (Bucur 2006: 2). It must have provided a quieter and serene environment to the monasteries, important for the meditation practices.

The architecture of the Gandhāra monasteries played a pivotal role in promoting environmental education. Plants are important to cleaning air, preserving ground water, preventing soil erosion, and maintaining healthy eco-system (Apffel-Marglin & Pramod 2000:300; Charnyuler 2007:22). Clean air forms a blanket of friendly gases around the earth, saving it from hostile cosmic radiations. Gandhāra monasteries played a fundamental role in preserving and sustaining clean bio-diverse environment, which needs to be yet explored by the ecologists. The Chinese accounts relate that the monks from Gandhāra were pivotal in designing environmental friendly architecture of the monasteries, with an abundance of trees, flowering plants and flowing streams. The Buddhist scriptures speak of the monasteries with running springs, bathing ponds and seven jewel trees (Rhie 2002b: 120, 169).

(iv) The metal workers: **The Kautilya Arthaśāstra reveals an advanced metallurgical knowledge. It mentions the shining metals like gold (*harita hiraṇya*), silver (*rajata hiraṇya*) and base metal (*ayas*), copper (the red *ayas*) and iron (the black *ayas*). It also mentions how to refine the silver and gold. Kautilya *Arthaśāstra* mentioned that mines occured more in Northern as compared to Southern India. The silver and gold coins were first introduced in Gandhāra as we find evidence in the Páńini *Ashtadiyāyi*. The**

Kautilya *Arthaśāstra* speaks of silver coins as *rajata, rūpya* and *tāra*. Rūpya was possibly used for punch-marked coins. A *rūpa* was a 'sign' or 'characteristic mark'. *Rūpya* was something which carries such sign. The earliest evidence of *rūpya* as a term for money is also found in the Páńini *Ashtadiyāyi* (Falk 1991: 115). Scialpi (1984: 60) mentions a constantly growing tradition of direct and indirect borrowing of the craftsmen skills from Taxila to other parts of the Indian Subcontinent from 6th *c.* BCE onwards. For instance, the coins of Taxila were spread to Ganges basin in about 5th *c.* BCE.

Very little is known of Gandhāra bronzes. However, the rare specimens yielded an advanced technology in bronze casting. The bronze bust of the Royal donor from Pathkot, approximately dating back to 7th *c.* CE, represents the wax technique preparation. The cast bronze figure of the boddhissattva Padmapani or Avaloketiśvara represents the *cire perdue* casting technique. Alexander Cunningham recovered one complete statue, two heads of the Buddha and one halo, all of bronze, cast in one piece in leaded brass, from Site No. 22 in Manikyala, dated to 5th to 7th *c.* CE (Dar 2007: 51). A small bronze Buddha statue (5th-6th *c.* BCE), executed in typical Gandhāra style was excavated in the mid decades of 1950s, in helgo Island, in the capital of Sweden. It is now housed in the Swedish Natural History Museum in Stockholm. The Bronze Buddha reveals long distance trade relations of later Gandhāra. Helgo was an important trading post from 5th to 8th *c.* CE (Johnston 2009: 3). Dar (2007: 45) also mentions the rare Gandhāra bronzes from five sites, i.e., Ramkot Fort, Cheyr (Pato Shehr), Mehlan, Patti koti and Burarian, in the area between the River Jehlum and River Chenab. He points out that there was once a sizeable collection of Gandhāra bronzes in the National Museum, Karachi, now all lost. The ritual incense burners belonging to 1st-6th *c.* CE, from unknown provenances in Gandhāra (Behrenedt 2007: No. 47; Fig. 25 & 52), all now placed in Metropolitan Museum, USA, also reveal the highest skill in the bronze industry (see Pl. 29a & b).

A small copper Buddha figure, revealing careful workmanship was found from Shekhan Dheri. The same site revealed the copper ore (Hargreaves 1914a: 29).

(v) The Taxila jewellery: **The Sirkap, Taxila finds comprise the most important jewellery in the whole Indian Subcontinent (Stone 2009: 81). The engraved gem type jewellery of Taxila was spread to south India and even Śri Lanka. An engraved carnelian representing a couple with an Erotes, excavated at Taxila, set in heavy gold frame, has four rings on the back. The South Indian intaglios were adopted from this design. The Bipartite pendant with Erotes on Sea Creatures was similar to a pair of pendants**

reported by Marshall in the jewellery market in Rawalpindi in early parts of 20th *C.* CE (Marshall 1975: 186; pl. XXVIII (a).

Aśvaghoṣa in his *Buddhacarita*[1] mentions two names for the goldsmiths, i.e., *svarnakāra* and *svarnakarmāra*. First, indicating an ordinary goldsmith and second a specialist. He also mentions the process of smelting and cleansing the gold, for making the jewellery.

The spherical weights of the jewellers and his scale pans were found from Taxila. The weights had spherical holes in their bases perhaps to adjust their weights to the standard laid down. Pieces of touchstone bearing streaks of gold were found at Taxila. It appears that gold was actually tested on these pieces. Kautilya Arthaśāstra instructed that gold should be tested on touchstones (Chandra 1979: 96).

The researcher visited old gold markets of the modern cities of Taxila and Rawalpindi and interviewed some jewellers, whose families practiced the craft for several generations. The traditional handmade jewellery was still used in 1970s. However, it diminished in 1980s, when the machine made designs became popular among people.

The traditional process of manufacturing the jewellery consisted in extricating the impurities, melting the metal, making it into sheets, drops or ingots, hammering it for bringing out the shape, cutting it, riveting or soldering the joints, solid casting, hollow moulding, engraving, embossing, doing *repousse* work, carving, decorating the ornaments with granules, drawing wires, setting of gems, and doing inlay work with paste and other material. The pointed chisels were employed for engraving the fine points of design. Hammering was an important process for making jewellery. The dies of bronze and stone found at Taxila were probably used for pressing the sheet of metal on them. The sheet was heated before pressing and cut out to the desired shape. The decorative process of granulation we see on the Taxila specimens (Chandra 1979: 99). The process of wire drawing was continued from Indus Valley Civilization. The thin pieces of the heated wire were passed through the holes in the stones previously prepared for the purpose, and the wire was stretched with a pair of tongs. The thin wires were prepared by passing successively through stone holes of diminishing diameters. Drops were made at wire ends to hold beads.

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[1] Aśvaghoṣa (ca. 100 CE) was amongst the celebrities of Kaniśka Empire. He either belonged to Ayodhya or Peshawar (Merium-Webster Encyclopedia 1995: 80). He was given to Kaniśka as a war booty (Chudhuri 2008: 18). *Buddhacarita* was clearly written in Gandhāra (Warder 1990: 180).

The filigree work consisted of soldering plain, twisted or beaded fine wire on the surface of the jewellery as in ear pendants of Taxila. The process of encrustation where the gems were studded on jewellery was possibly continued from Indus Valley Civilization. The place to be set with gems was hollowed out, and the stone was set with paste, or by raising the edges and turning them out on the stones. The Taxila jewellery manifests numerous semi-precious stones set in gold (see Pl. 30a). The gold plating on Gandhāra statues and the relief also reveals the specialty of the goldsmiths, for instance, the relief with Dipankara Jātaka (2nd *c.* CE) found from Swat, and now placed in Metropolitan Museum, USA (Behrenedt 2007: No. 31) (see Pl. 31b).

The goldsmith tools consisted of blow pipes, clay crucibles, fire carriers, bronze hammers, chisel, chopper, engravers, anvil and tongs (Chandra 1979: 101). One can still observe the similar tools in the old gold markets of Punjab and Khyber Pakhtoonkhwa (ancient Gandhāra) (see Pl. 31b, 32a & b, 3a & b).

(vi) The glass workers: glass tiles from Dharmarājika Stupa: **The glass objects were found in great variety in Taxila. High glass technology is revealed by glass tiles of Dharmarājika stupa (3rd *c.* BCE) in a variety of colors (Bhardwaj 1979: 66). Their large size testifies to advancement of technology in molding large glass objects. The good condition of the tiles reveals high level of glass technology, not so far been found from any other contemporary site. An ante-chamber of A1 shrine (5th *c.* CE) of the Kalawan monastery was paved with tiles of blue glass (Siddique 1937: 162). The *Pradakshina Patha* of the main stupa of Butkara I was paved with glass tiles (Faccena & Giorgio 1962: 18). A lump of coarse greenish glass was found on Northwestern corner of the Sahr-i-Bahlol monastery (Stein 1915:112). The glass flasks were recovered from Sirkap (1st *c.* CE).**

The chemical analysis of the Taxila specimens reveals the presence of the lead oxide, barium and other raw materials used as the coloring agents for the glass. Lead oxide provides formation of crystal glass and that of barium imparts high resistance to heat. The large scale glass making at Taxila reveals the technology of glass blowing towards the end of the First *c.* BCE-the most revolutionary ever made in the history of glass ware (Chaudhuri 1983: 206, 211).

(vii) Metal engravings: **The copper inscribed metal plates were recovered from Kalawan monastery. The copper plates were hammered out and the letters were engraved on them (Ghosh 1990: 360; Marshall 1936: 162). The inscribed silver scroll, the gold plate and silver plate from Taxila reveals scribal work on precious metals (Marshall 1916:**

18). The goldsmiths were also possibly involved in the scribal work as the stone reliquary of Uttara, the wife of Commander Indravarman of Apracana (1st *c.* CE) was inlaid with gold wire. Four letters were found inlaid with a single piece of gold wire. The wire was twisted to form the appropriate shape of the syllable and then pressed into the corresponding form that has previously been engraved into stone. The letters were written with *pointille* technique, and were double lined. The letters were first thinly outlined with a pointed instrument. Another scribe retraced the characters with a much broader scratching device (Salamon 2003: 56).

The researcher surmises this section by enumerating that Gandhāra constituted a prosperous society that excelled in numerous crafts. The archaeological and palaeographic evidence suggests that the financial prospects were perhaps judicially divided among numerous classes of the society. The researcher envisages the Gandhāran, a strong social system that provided patronage and circulated the net income opportunities to both; the educated as well as the traditional craftsmanship. The researcher asserts that a practicing craftsmanship creates the maximum working hands in the society and reduces the unemployment. The skilled craftsmanship develops a 'skill culture' in contrast to the pure academic culture and preference for the 'white collar'. The craftsmanship is largely overlooked and Pakistan (the ancient Gandhāra). Nonetheless, it should be given due consideration for the socio-economic prosperity (Smith 1994: 55).

4.9 Autonomy and Sustainability in Gandhāran Monasteries[1]: **On becoming Buddha, Prince Siddharatha, through his formal teachings, started to reform the spoiled society of his time in the 5th *c.* BC. In due course of time, his doctrine took the shape of an established religion, known as Buddhism. For propagating the religion far and wide and imparting education, the Buddhist missionary-monks set in cities and near to towns and villages well-organised and disciplined institutions, which are acknowledged as monasteries. Regardless of their size, Buddhist monasteries contributed to the promotion of all branches of knowledge for centuries. Interaction of monks with laymen was inevitable for the Buddhist monastic life. Although Buddhism rejects the mundane life, yet monks could never sever themselves from the social circle, because they depended on the laity for their subsistence and developmental works in monasteries as well as support offered by rulers. A special charter or fundamental rules for monastic order (*sangha),* given by**

[1] Already published as, 2013 Autonomy and Sustainability of the Buddhist Education: A Case Study of Gandhāran Monasteries from the 1st to 3rd Century CE. *PUTAJ-Humanities and Social Sciences*, 20, 29-39

the Buddha himself, lead to its identity, recognition and respect in the society. The scriptural texts reveal that, right from its start, the Buddhist *vihara* (temporary abode for wandering-monks) was developed into a more complex *sangharama* (monastery), a self-sufficient permanent abode, growing food on its farms, gifted by donors.

The possession of property and rich endowments made the monasteries economically sound and autonomous in their decisions, more so in imparting sustainable quality education and ascertained their survival. MF Swati is of the opinion that Gandhāran monasteries developed such a mechanism that the laity and the state generously contributed to the construction and maintenance of monuments, monks and students as well as their mission (Swati 1996:12; 1997:29; Kenneth, Kenedy & Gregory 1984). In addition to this, and technical knowhow further enhanced their control over the community. Consequently, monasteries became powerful institutes in their own right, endowed with rich resources, imposing buildings, arts and crafts. Strong economy made them mini-states within themselves that posed, sometimes, threat to rulers (Auboyer 1961:217; Gour 1929:208). And the Buddhist monks exercised a powerful influence in Gandhāra (Hastings & John *n.d.*, 799).

The empowerment rules, as referred to above, exercised by the Gandhāran monasteries, certified their sustainable growth. They are elaborated below:

1: Dress Code or Uniform Monastic Robe
2: Charter of the Monastic Order
3: Endowments or Funding to the Monasteries
4: Manifestation and Manipulation of Art and Architecture
5: Trade or Merchandise and Trading Activities of Monks

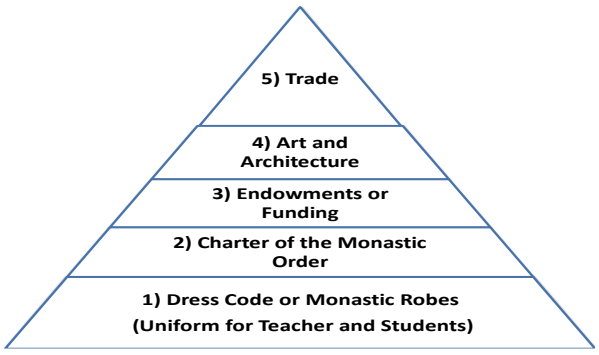
5) Trade
4) Art and Architecture
3) Endowments or Funding
2) Charter of the Monastic Order
1) Dress Code or Monastic Robes
(Uniform for Teacher and Students)

Fig a: Showing Hierarchy of the Empowerment Rules

Rule 1 Dress Code or Uniformity of the Monastic Robe

Clothing has a powerful effect on how people perceive each other. Institutes prescribe standard clothing as uniform to convey their vision, mission and philosophy to the general public. Uniform dress reflects on an institute's standing and its organizational values (Joseph 1986).

The Buddhist monastery was, perhaps, the first to have introduced institutional uniform for teachers and student monks. Gradually, such robes became an apparent sign of monasticism. The monastic robe has, therefore, been interpreted as a means to reveal the ascetic life and, also, to distinguish Buddhist monks from the Brāhman and Jain ascetics on the one hand and lay persons on the other. It is also possible that monastic robes were introduced to get the institutional identification in the society. It symbolised special behaviour code of monks and commanded respect and dignity from the masses (Joseph 1986; Kieschnick 2003; Kieschnick *n.d*).

The robe seen in Gandhāran reliefs has close affinity with traditional dresses of Khyber Pakhtunkhwa. The *Rigveda* mentions the use of two garments, *vasana* or *vastra*. The *vasa* or the lower garment and *abhivasa* an upper garment or a shawl like cloth. The Upaniśads speak of two garments *uttariya* (upper) and *antariya* (lower), while the *Samhitas* refer of another garment *nivi* or undergarment. Fabric was merely draped around the body, one piece covering the lower body, while the other (*uttariya)* draped round the torso like a shawl. Sometimes a third fabric or scarf was used to cover the head. Arrian on reference to Nearchus[1] reports that people of the northwest wore an undergarment of cotton reaching below the knees, and an upper garment which was partly thrown over their shoulders and partly twisted in folds round their head. This type of robe was called as 'Robe of Merit Field' in the *Vinaya.* The disciples of all previous Buddhas wore this kind of robes. The ordinary dress of north-western provinces at the wake of Kuśana conquest consisted of unstitched garment, *antariya* (*dhoti* or lion cloth), *uttariya* (*dupatta* or shawl) and *kayabandh* (cummerbund or sash), with a turban for men. The fashion of wearing sewn garments came with the Kuśānas (Alqazi 2002:465; Yifa 2002:64).

Huan Tsang reported that white dress for common people and white robes for monks were esteemed all over India. He described three types of robes, i.e., *antaravāsaka*, *samghati* and *uttarasanga*. Different schools were distinguished by wearing *nivāsana* (lower garment) and *nivasa* (skirt) in different ways. The *nivasa* had no string or girdle. I-Ching reported that the Sarvāstivadans wore *nivasa* with a pair of plaits turned out on

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[1] Nearchus, a favorite Admiral of Alexander, his expedition travelled from the Indus to the Persian Gulf.

its both sides, and the Māhāsañghikas crossed end of its right side on the top of the left tucking it in there to keep it in place. Huan Tsang worn a loose garment, draped in the Gandhāran style (Watters 1904:151).

A complete portion of the Mūlasarāstivada Vinaya of the Gilgit manuscript, the Civaravastu, is dedicated how to design monastic robes. Kathina-Vastu describes cutting, sewing, stitching and dyeing of cloths for making robes of monks (Dutt 1984: xviii). The *jātakas* also reveal the details of preparation of robes (Baka Jātaka.I.38; Cowell 2002:95). Furthermore, the Gandhāran reliefs present a number of donation scenes, where robes are being presented to the Buddha, thus depicting respect for the monks' robes in the society. Robes eventually became a mark of distinction in China and a number of monks there even risked persecution rather than to surrender their robes (Kieschnick 2003:11). Later on, the Christian Monasteries also adopted the policy of a uniform monastic dress.

The institutional uniforms of modern times, possibly, take their roots in the traditional monastic robes of the earliest religious universities in Germany, France and England. The earliest recorded institutional dress, *cappa clausa,* in 1222 CE in Canterbury was similar to stereotypical monastic dress. The dress code was considered as a mark of identification and distinction till 1960s, when it was opposed in the American and European schools on the basis that it might infringe the freedom of speech of the young people (Brunsma 2004:3). The teachers and students in the modern world have largely rejected uniform, and consequently teachers have lost their social identity and the students have neglected their behaviour code.

Fig. B represents the psycho-social model for empowerment of an institute, where identity leads to recognition, respect and authority in the society.

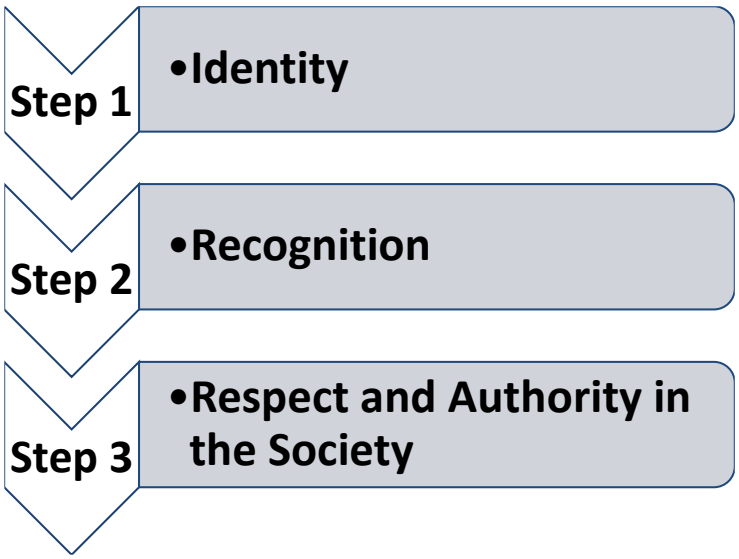

Fig b: Showing relationship of Identity, Respect and Authority in the Society

Rule 2 Charter of the monastic order

The Pātimokkha Code was the 'Charter' of the monastic order that was discovered in the 'Gilgit Manuscripts'. Such a charter had never been adopted by any religious sect beforehand. It formed the basis of an elaborate system of monastic regularity. In the code, the Buddha forbad four things (*cattari akaraṇīyāni*) to be done by the monks. It also laid down rules for the settlement of disputes among the monks and set rules for their good conduct. The Chinese version revealing the Sarvastivadan Vinaya, and the Tibetan version *so-sor-thār-pa,* revealing the Mula-Sarvāstivadan Vinaya were translated from the 'Gilgit Manuscripts' (Jettmar 1990:310).

Rule 3 Endowments: A means to funding educational enterprises

Giving away gifts to renowned teachers was a Gandhāran culture since the Vedic period onwards. The Kautilya's *Arthaśāstra* mentions land grants to celebrated teachers and specialists in the *Vedas*. Such land-gifts were exempted from taxes and any kind of fines, and were transferrable to heirs of the teachers (Rangarajan 1992:180).

The Gandhāra reliefs, the palaeographic record, the *jātakas*, the *śāstras,* and the travel accounts of the Chinese pilgrims mention bountiful donations to monasteries by the laity as well as the state. The education expenses of monks were made through generous endowments in cash as well as in kind. The resident elites sponsored building monasteries, production of Buddhist literature and making of sculptures. Gandhāran monasteries might have had extensive land-grants, which supported educational activities, spiritual practices and ensured provision for bare necessities of life.

Gandhāran reliefs and the literary sources also indicate that endowments were a popular act of merit among the followers. Milindapañha describes at length the transmission of financial capital into an act of merit (Elverskog 2010:20). The common people were promised the heaven in the hereafter for their contributions to monasteries. The majority, thus, must have had donated enormously to gain merit here and in the hereafter. Nāgarjūna in his *Ratnavali* has a lengthy section instructing the king to provide monastic establishments with images of the Buddha, stupas and *viharas*, adorned with all precious substances,…"the gold and jewelled friezes, silver flowers, diamonds, corals, pearls, emeralds, cat-eye gems, and sapphires, musical instruments and lamps." (Walser 2005:152-153). He should also provide money necessary for the upkeep of monastic establishments. The Buddha images seated on lotuses were described at length. *Lotus Sūtra* promises repayment even to children who just play to make stupas from the cheapest common material (Soper 1959:46).

According to Asanga, monks may possess wealth and property, even gold, silver and silken clothes, because such possessions allow them to be more helpful and useful to others (Conze *n.d.* 57). Buddhacarita.II informs us that people constructed gardens, temples, hermitages, wells, water halls, lotus ponds and groves in devotion to the *Dharma* (Johnston 2000:22). Aśvaghoṣa describes gifts of abodes, vehicles, lamps, food and cloth and land grants to monasteries, even if the land was pricelessly expensive. The holy text promises every merit from personal virtues to the highest learning, strength, power and fame in the society, freedom from vicious cycles in the hereafter and final salvation. It describes that the giving destroys ignorance and paves way for acquiring knowledge. The giver attains the highest concentration because he becomes free of the love of worldly objects. The giver goes to heaven due to gift giving to a *vihar* (Aśvaghoṣa & Edward 2004; Falk 2003:90).

The Gandhāran reliefs highlight the theme of donation to the monastic order, for instance, two reliefs from Butkara-I show princely donors (see Swāti 1997: Pls. 65, 66). The inscribed objects from Taxila largely reveal the donative formula *parigrahe*, i.e., 'for the acceptance of' (Dar 1990:217). The endowments eventually became so copious in the Kuśāna rule that kings may have appointed officials to receive such gifts and grants. Three relief panels from Shniasha[1] show the state functionaries receiving donations from devotees (Swāti 1997: Pls. 230,231,238). Other scenes reveal that a system may have been evolved for keeping proper record of donations (see Pl. 33b, 3a; Table 6).

[1] Now housed the SSAQ Museum, University of Peshawar, Khyber Pakhtunkhwa, Pakistan.

The palaeographic evidence seen in an inscription, found in Kaladarri Nadi near Dargai and a stone reliquary from the Malakand Agency, both in Khyber Pakhtunkhwa, reveal the donation of a water tank and a dam to monasteries (Konow 1929). The Ara, the Marguz, the Peshawar Museum, the Zeda and the Shakardarra Inscriptions, all refer to the donation of wells, possibly, to renowned monasteries. Such wells were dug in the honour of mother and father, or other relatives, or to get merit in this life and the hereafter (Dani 1995:41; Konow 1929:79, 145,157,162,165). The donative formulae on such inscriptions were considered to be so important, that sometimes their forgeries were reported. S Konow (1929:162) mentions the Rāwal Inscription of the year 40, in a village near Mathūra, as a forgery of the Shakardarra Inscription. The Rāwal stone was an attempt to imitate the Shakardarra formula, which was, probably, thought as a magic spell, to reveal its power to bring sweet 'water' to the Shakardarra well. The stone was possibly forged to engage the same mystic power for the benefit of a well, or well of some sacred establishment in Mathura. The Panjtar Inscription refers to gift of trees (Konow 1929:70).

Rule 4 Art and architecture: the expression of cultural pride

The Chinese chronicles mention Gandhāran monasteries for their unique architecture, paintings, inscriptions, statues and reliefs. It must have had proclaimed the wealthy status of monasteries that was instrumental in maintaining their prestige and patronage in a highly competitive religious arena, created by different rival sects of Buddhism. Many monasteries relied on reputation of its sacred objects to attract patrons and to build prestige among the masses. The possession and display of sacred artefacts became a potent source of power and competition with rival monasteries used for attracting pilgrims from faraway lands. Royal patronage and hosts of pilgrims reinforced the power flow.

Referring to rich architectural traditions over here, Huan Tsang mentions double towers, connected terraces, storeyed piles and deep chambers in Gandharan monasteries at Peshawar (Beal 1884:103). S. Rehman, H. Khattak and Faiz-ur-Rehman reported five storey towers along extensive remains of Buddhist monastic establishments at Buner (Rehman *et al*. 1996:50). In the 6th CE, another Chines pilgrim Song Yun speaks of the wealth, variety and abundance of monasteries in Gandhāra and Uḍḍiyāna (Beal 2004: cv). He also reported every kind of utensils in gold and bejewelled vessels of thousand forms and variety in the monastery of Shah Ji-Ki-Dheri at Peshawar (Jansen 2009:291).

The art and architecture of the Chinese monasteries was so elaborate and pleasing that the rich visited them to enjoy its beauty, even if they did not have any fervour for Buddhism. Such visits opened the flow of Buddhist doctrine and lore to circles outside the monastic fold. Fa Hien described completion of Nava Vihar in Central Asia in eighty years, witnessing reigns of three kings. Apartments for the priests were lavishly carved and the beams, pillars, folding doors and windows were decorated with gold, silver, lapis lazuli, crystal, ruby, emerald and coral (Hopkirk 1980:25). The Chinese chronicles reveal that Central Asian monasteries worked hard to win the socio-economic royal patronage in the 6th-7th *c*. CE (Lowe *n.d.*: 134).

Some historic clues point that the hoarded wealth caused the robbing of the monasteries. Huan Tsang reported that the robbers attacked and destroyed monasteries in Kapiśa due to their hidden treasures (Beal 2004: xciii).

Rule 5 Trading activities of the monks

Written records of trade routes used by the Buddhists are not numerous. However, archaeological investigation provides ample evidence. The intra and inter-regional trade was not only an effective way of transmitting the Buddhist philosophy and culture to other cultural zones, but it also became a potent means for developing a substantial economic base for the monasteries. Under the Kaniśka's rule when trade was at its peak and monasteries were strongly patronised, a mutually beneficial relationship was formed amidst monasteries and local mercantile communities in urban centres like Taxila (Duiker, Jackson & Spielvogel 2008:192). The influx of wealth through trade empowered monasteries to carry out missionary activities with a great freedom and potential. The first lay converts to Buddhism were merchants, and the Buddha had already laid down virtues of ideal traders so that they could be a role model for others (Sen 1999:72). Merchants were eager to build stupas and donate money to monasteries in return for social prestige and better life in this world and after the death (Duiker, Jackson, & Spielvogel 2008:193). Consequently, a majority of the monasteries were built in large civic trading centres. The trade routes worked as the backbone for the growth of their missionary activities.

The Mauryan and the Kuśāna dynasties expanded economic activities using all available means of trade and commerce. They were also aware of the importance of Buddhism and its trading networks in generating tax revenues for the state. Under the Kuśānas the support of Buddhism reached to its climax. Early Buddhist scriptures realise the importance economic prosperity and inevitable disparities associated with generating

wealth.[1] Milindapañha describes seventy-five kinds of jobs. Rates of currency conversion are also found in ancient texts.[2] Successively the Sassanids (240-651 CE), the Hūnas (350-550 CE) and the Muslims (7th *c.* CE) in their own turn took control of the lucrative trade routes and the revenue they generated (Elverskog 2010:20; Kenneth & Possehl 1984:122; Liu Xinru 1988:37).

Monasteries started guiding and controlling trade and the trade routes and, at times, taxed the caravans. At the time of Kaniśka, merchant monks increased many-folds the exchange of religious and luxury items across the borders (Sen 2002:50). They in return also brought valuable exotic goods, ideas and technologies. It helped in generating wealth beyond limit that made monasteries exceedingly powerful entities. Mercantile ventures must have had required a sizable investment and the monks over the years had attained mastery over commercial know-how and developed capability in the demand and supply rules, to undertake large scale enterprises.

Xinru Liu argued that Buddhism reached to China through gift giving, trade and market exchanges between India and China in the 1st Millennium CE (Sen 2003:145). The missionary monks to China were successful merchants as well, bringing aromatics, jewelled furniture, trees and medicinal herbs with them and presenting them to the Chinese court. Such objects from Khyber Pakhtunkhwa became priceless commodity and were in high demand in Chinese markets (Sen 2003:124).

The Chinese pilgrims took back home information of 'sugar-candies' of Gandhāra. Emperor T'ang T'ai Tsung sent mission to the later country to learn the art of making sugar and sugar candy from the sugar cane (Watters 1904: 201). At first it was used in medical prescriptions, but later on it was used as a luxury item and presented as a tribute to the Chinese Emperors. It started appearing in the urban markets in the Song period and became a staple food of the Chinese in Ming and Qing Dynasties and a very profitable trade item for the merchants of Gandhara (Sen 2002:150).

The Chinese monks also became successful traders, who were sent by emperors to other countries to collect medicines and learn techniques of making sugar (Kieschinck 2003:280). A fifth *c.* Chinese monk criticised his former brethren in similar words, 'monk become merchants and engaged themselves in barter, wrangling with masses for profit. One can find similar power strategies used by the Nestorian monasteries to

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[1] The early Buddhist canon describes six classes of financial beings: very wealthy, wealthy, faring well, faring poorly, poor and destitute (Elverskog 2010:20).

[2] The Śārdulakarn-āvadāna, translated into Chinese in 230 CE, notes that the Magadhan *mashaka* is equal to twelve grains of gold and sixteen *mashaka* is equal to one Chinese *jin.*

maintain and enhance trade between the Sassanian Empire and Śri Lanka in the first three centuries of the Christian Era (Boeparachi 1997/8:282; Valeryevna 2009:301).

On the basis of archaeological and palaeographic evidence, we can surmise this section that by strictly following the standardized rules, the Gandhāran monks safeguarded power and authority of monasteries. The above discourse suggests that specific uniform, abiding by the rules and regulations, generating and managing finances, expression of cultural values through art and architecture, and interaction with the outer world through trade and other ties are time-proven effective tools for educational institutions. Modern institutions of higher education should follow similar steps to play their assertive roles in the society and play a prestigious sustainable leadership role in the community.

CHAPTER 5

DISINTEGRATION AND LEGACY OF THE GANDHĀRAN EDUCATION SYSTEM

The chapter comprises two sub-sections, i.e., 5.1 and 5.2[1]. The sub-section 5.1 discusses the wealth indulgence, the deteriorating learning attitude of the Buddhist monks, the Brāhman resentment, and the emergence of Tantric mysticism as major causes affecting the Buddhist disintegration in Gandhāra. It also analyzes the relationship of the Muslim invasions and the final disappearance of Gandhāra Buddhism. It highlights the fact with help of historical and archaeological data that the foreign invasions might have had serious impact on the Gandhāran monasteries; however, they were not systematically annihilated by them. Rather, the interplay of several factors along with the migration of the leading Buddhist figures to the Far Eastern countries, and the possibility of the conversion to Brāhmanism and Islam had finally extinguished the beacon of Buddhism from Gandhāra.

The sub-section 5.2 focuses on the historical data of the Muslim world of 8th *c.* CE. The data contradicts the general impression that the Muslim invasions pillaged the Buddhist monasteries, killed the monks and converted masses to Islam through sword. Rather it suggests that the intellectual legacy of the Buddhist monks deeply impacted the Muslim education and scholarship in the 8th-10th *c.* CE. It also highlights the extension of Gandhāra legacy further east to Asia. It highlights different strands of the Buddhist impact on culture and education of the Far Eastern and the Middle Eastern countries.

5.1 The Decline of Gandhāran Monastic Establishments and the Disappearance of Buddhism from Gandhāra

3 The colonial archaeologists have largely charged Muslim invasions with disintegration and final disappearance of Buddhism in Gandhāra. The present section argues that this is an over simplification of the factors effecting the decline of Gandhāran monasteries. It details that the large network of Buddhist institutions spread from Taxila to lower Indus Valley at one end and from Kaśmir to Khyber Pakhtunkhwa to Kapiśa (i.e., modern Afghanistan and Central Asia), in first few centuries of the Christian Era could not disappear due to some single

[1] **Already published as, 2015 Islamic Inroads and Buddhist Institutions in Gandhāra. *Quarterly Journal of the Pakistan Historical Society (Historicus)*, LXIII (3), 61-84**

factor. Rather, the archaeological and historic evidence reveals numerious factors responsible for decline of Buddhist institutions in Gandhāra. The sub-section argues that the wealth indulgence and the dwindling learning attitude of the Buddhist monks; the Brāhman antagonism, and the emergence of Tantric mysticism sectarianism as major causes affecting the Buddhist disintegration in Gandhāra. In this backdrop, the sub-section also brings forth the symbiotic relationship between Muslim rulers and the Buddhist monks, when they first penetrated into Lower Indus valley and marched to Central Asia, crossing through Gandhāra. The intellectual legacy of Buddhist monks deeply impacted the Muslim education and scholarship in the 8^{th}-10^{th} *c.* CE.

3.1.1 **(i) Wealth indulgence and the luxurious life of the monks-as a prelude to disintegration of the Gandhāran monasteries:** *We argue that wealth indulgence and luxurious life of the Buddhist monks preludes the degeneration of Buddhist institutions in Gandhāra. Mahāyāna movement had already relaxed the* Vinaya *rules for a disciplined life attained through rigorous meditation practices; rendered a new boost to stupa worship, its embellishment and donations (Auboyer 1961:217; Mizuno 1955). Songyun speaks of the wealth, variety and abundance of the Buddhist stupas in Gandhāra and Uḍḍiyāna. Fa Hien described elaborate rituals of* Rath Yatra *(or Car Festival), accompanied by music and dance in the Buddhist monasteries of Khotan in Takalmakan desert (Hopkirk 1980:25). The wheeled car, exhibiting the bejewelled Buddha and* boddhissattva *statues, was adorned with precious objects, and fixed with silk and canopy curtains (Beal 2004: xxvi-xxvii). Songyun reports that adoration was paid to Buddha statue with conch, drum, flute and all kinds of wind instruments (Gour 1929:208). The scholars also described the dwindling teaching and learning attitude of the monks as a preface to disintegration of Mahāyana monasteries in Gandhāra (Jones 1949:71). Mahā-parinirvāna Sūtta.2.8 reckons the growth of* sangha *with devotion of monks towards teaching (Miller 1900:8). However, when*

Huan Tsang visited Gandhāra, the meditation practices of Uḍḍiyāna monasteries were already dwindled and those were surviving in a deteriorated state (Berzin 1996). The monks (at Balor) were practicing meditation without inner discipline. The Shamanic practices meant to gain protection from the supernatural powers took over into the monasteries (Dutt 1998:262).

3.1.2 **(ii) The Brāhman antagonism and the Buddhist compromise towards Brāhmanism:** *The rise of strong theistic groups in Gandhāra and Gupta Royal support to Brāhmans was another factor leading to weakness and compromise of Buddhist institutions. The Buddhist teachings for rejection of Brāhmanical cast system were an attack on existing socio-religious practices, thus invoking a conflict with the Brāhman priesthood. The Tibetan texts, the* Jātaka *and the Canon provide details of extreme opposition of the rival sects (Gour 1929: 148; Smith 1999a:194). The Chinese* Prajna *commentary, entitled as* Ta Chih Yu Lun *translated by Kumarajiva reported Śākyamuni's extreme sufferings due to opposition of orthodox religious leaders. Smith (1999a:37) reports capture of Kapilavastu and cruel massacre of Śākya's clan by King of Kosala shortly before the death of Buddha. Later on, Vikramāditya, King of Srāvashti, Kshemagupta and Śri Harsha in Kaśmir are enlisted as the worst persecutor of the Buddhists. Gour (1929:503) mentions that deadly conflict between Brāhmans and Buddhists was directly responsible for establishment of Harsha's Empire.*

The Brāhman texts e.g., *Bhamshya* of *Prasaastapada,* the *Varttika* of *Uddyotakara* and *Vrihat Samhita* of *Varahamihira* (4th-6th *c*. CE) describe the Hindu hostility towards the Buddhists (Kapoor 2003:701). Gupta Period editions of *Mahabharata* (300-450 CE) reflect on tremendous damage wrought by rise of Non-Brāhmanical Empires at Pataliputra (i.e., Mauryans), and by 'Heathens' (i.e., Buddhists and Jains). Patañjali (*c*. 150 BCE) in his *Mahābhāsya* cites *śramana-Brāhmana* (denoted for Buddhist monks) along with 'cat and mouse' and 'snake and mangoose' (Jaini 2001: 49). In *Vrihanānavadiya Purāna* entering a Buddhist monastery was a sin beyond forgiveness. According to Anubbhāgavatā, an Uapusāna was especially dedicated to the subject of *Kalki avatār,* the coming *avatar* of Viśnu, whence first expedition of Kalki will be against the Buddhists. The Jains were also intolerant to the Buddhists (Fitzgerald 2007:59; Rhys 1999:214; Narasu 1948:34).

Virardi (2005) mentioned that Hellenistic models were followed for centuries in Gandhāra. However, the abrupt change was linked to new patronage and still largely unexplained events. In second half of 7th *c.* CE there was probably a substantial migration of monks from India towards the Buddhist kingdoms of Western Central Asia, where the Chinese patronage provided them security and protection. The crises deepened after death of Harsavardhana, who supported Buddhism despite the growing pressure of the Brāhmans. With adoption of Buddha as Viśnu's *avatar* the Brāhman priests started officiating the Buddhist stupas and monasteries (Jaini 2001:138). Eventually, various Buddhist monasteries fell to the Hindu revivalists. Early Śaivite temples in Gandhāra and *Matha* at Kashmir Smast were the places where young Brahmans were trained in both philosophy and armed conflict. We find early evidence of Brahmanical temples from clay models or miniature votive copies from various parts of Gandhāra. For instance, votive Brahmanical temple from Shah-ji-ki Dheri points a theistic seizure over it (Virardi 2011: 162). Brahmanical temple started at Katas, Bilot, Kafirkot, Mari and Kalar at Salt Range in 6th-7th *c.* CE. The Brahmanical Temple at Barikot, Uḍḍiyana was built in late half of 6th *c.* CE. When Huan Tsang visited Gandhāra, the Manikyala monastery was deserted and was resided by Śvetāmbara Jaina monks (Dutt 1998).

The Buddhists compromised with the popular cult of Brāhmanism which gradually took hold over the Buddhism. The Brāhman gods entered into the Buddhist Pantheon and Brāhman culture superseded over Buddhism. Buddhist priests introduced Hindu tenets of idolatry and elaborate ritualism as early as 3rd *c.* CE. The rites and ceremonies entered into Buddhism giving it an appearance which could in no way be distinguished in elaborate rituals of Brāhmanical worship. In the Gupta Period the Buddha was worshipped in same way as Krişna (Jaini 2001:89). The Śaiva divinity Skanda, of the Brāhmanical Pantheon had already become a favoured representation in Gandhāran relief as early as 3rd *c.* CE. A Brāhmī script from Abbottabad, preserved in Lahore Museum, refers to 'Temple of Skanda' (*kumārra-sthāna*), having been constructed by foreigners. A rare Gandhāran schist relief in the private collection of Mr. Julian Sherrier represents two Śiva couples standing side by side, i.e., Śiva and Pārvati. Śiva is represented with four arms and three heads in traditional *ūrdhvaretas* pose. The relief also represents Skanda and Sasthi, the consort of Skanda (Agrawala 1995:329). Virardi (2011: 157-58) relates the larger Indian picture with disintegration of Buddhist monasteries in Gandhāra and Uḍḍiyana. The Maitraka kings provided support to Brahmans in Saurashtra. The local Buddhist king was forced to surrender the lands to the Bhagavats and become a convert. Renaissance of *varnāśramadharma* (a cast society)

caused a relapse of capitalist economy of the Buddhist trading class and violent clash with former owners of the lands. A network of the Bhagavats and Pāśupatas took hold of political and social control over society. The *deva* temples became organisational and economic leaders of the society. The theistic groups attacked Buddhist monasteries in between *ca.* 550-580 CE.

Huisheng visited Gandhāra in 5th *c.* AD and reported that almost all people were Brahmans. Huan Tsang reported a large number of thriving temples of powerful 'heretic groups' in Kapiśa and Gandhāra proper, possibly referring to Paśūpatas (Virardi 2011: 154). Virardi (2011: 150) also reports Śivaite reliefs from Gandhāra, e.g., Umāmaheśvara stele in Sherriar collection and the image of devi Guligram in Swat by 6th *c.* CE. More than one hundred graffiti depicting triśula were incised along the monumental access to the sanctuary of Surkhkotal in Bactria/Tokharistan. Buddhism was gradually fused with Śaivas and Vaishnavas by 7th-8th *c.* CE (Williams 2009: 170).

(iii) The sectarianism and Gandhāra monasteires: **A detailed analysis of existing literary sources reveals that the widespread sectarianism within Buddhism caused deep internal weakness. Morgan (1956: 186) mentions that Māhayāna was first developed in an environment strictly occupied by the Hinayana Sects. The scriptures of both sects mimic antagonism among different circles. The Chinese translation of the Śāriputra's Pariprcchā sūtra states that there were Sarvastivadans, Mahiśāsakas, Dharmaguptas, and Kaśyapiya resided at Uḍḍiyāna at the Huan Tsang times. Huan Tsang mentioned eighteen sects altogether among whom five sects of the Māhayāna Buddhists resided at Uḍḍiyāna. There were hot discussions among them and all of them claimed supremacy for their own sect (Dutt 1998: 261; Watters 1904: 160). The Little Vehicle was condemned at a conference held by King Silāditya (Harsha-Vardhana) at Kanouj in 634 CE (Willaims 2009: 167). Nāgarjūna, Asanga and Aryadeva criticized the heterodox doctrines held by some Sarvastivadan monks. Abhisamayālamkara ascribed to Nāgarjūna and taught as a textbook in the monastic schools of Tibet and Mongolia, reveals discord among different sects (Leningard 1932: 3). The Gilgit manuscript (Dutt 1984: xiii) and the Abhidharma Mahāvibhāsā Śāstra contain harsh criticism on the doctrines of other groups of monks, including the Mahāsanghikas, Dārstāntikas, and Discriminators (Harikawa and Paul 1993: 135). Taranatha 'History of Buddhism in India[1]' reveals that Māhayāna sects hotly reacted when Tantric texts were taught at Nalanda University (Elverskog 2010: 39). Some Buddhists from Northwest regions and**

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[1] **translated by Lama Champa and Alaka Chattopadhyaya (1900). New Dheli: Motilal Banarsidass Private Limited**

Śri Lanka burned the Tantric texts and smashed the silver statue of Hevajra placed at Vajrasena Temple in Bodhgaya. Huan Tsang referred to the sectarian discord of the Sindhi Buddhists. On other hand, Tantric Buddhists from Sindh showed militant antagonism towards Māhayāna Buddhism during the reign of Pāla King Dharmapāla towards the end of 8th *c.* CE. A group of Buddhist monks from Sind travelled to the Temple of Vajrāsanaat Bodhgaya, and burnt the scriptures there (Macleans 1989: 8).

(iv) The Hūns: **The Hūns' invasions have been charged of the disappearance of Buddhist monasteries in 5th *c.* CE, and the Muslims in the later centuries (Dutt 1998:32; Śrivastave 2003:216; Mizuno 1969:44; Staviski 1993/94:115). Nonetheless, several other scholars have challenged this opinion. Behrenedt (2003:10) maintains that the Hepthalites did not cause a complete annihilation of Gandhāra monasteries. The scholars took the matter on its face value and assumed that they systematically pillaged the Gandhāra monasterie. Rather, the monasteries or their offshoots remained operative for several centuries later on. For instance, Sahr-i-Bahlol was flourishing in 4th-5th *c.* CE, when the shrines of monumental images, and larger than life size Buddha statues were designed and it continued till 7th *c.* CE. The area 'D' of Sahr-i-Bahlol produced more than twelve full size sculptures. The Gandhāran monasteries, e.g., Shah ji-ki-Dheri in Peshawar and Bhamala in Taxila were in occupation in 6th *c.* CE and even later. Late 7th and 8th CE coins were found from Dharmarājika, Manikyala and Butkara-I Buddhist sacred precincts.**

The Buddhist legends and the Kalhana's Rajatarangini narrate cruel atrocities of the Hūn invaders. Though the wide Hūn invasion caused a serious blow to some of the Gandhāran monasteries, there is no record of any anti-Buddhist policy resulting in a complete annihilation of the monasteries. Songyun and Huisheng (520 CE) reported disregard of Hephthalite *tegin* towards the diplomatic officials of Northern Wei, but not brutality (Kuwayama 2006: 117). According to the 'Western Region' chapter Weishu, Yarkand, Tashkughan, Wa'Khān, Chitral and Gandhāra were subject to Hephthalites. Mihirikula had an expansionist vision, which he diplomatically achieved through growing power of the theistic groups, and overlooking the weedy Buddhist communities. Mihirakula granted large sums to community of Brāhmans from Gandhāra settled in Bijbihāra in Kaśmir, but there is no mention of any grant to Buddhist monasteries (Smith 1999b:681; Siudmark 1993:681). The Buddhist monasteries in Swat valley suffered the war ravages for a while, but later on resumed their functioning. When Songyun visited Swat five years after the Mihirakula's invasion he reported monasteries flourishing over there. Later on they were, of course, reported desolate, but due to cut

off trade and loss of economic support. Moreover, the general economic condition of Kaśmir degenerated during Hūn rule. The overland trade routes were disturbed and ultimately closed down for some time. Gold coins went out of circulation and Toramana struck copper coinage in 6th *c.* CE (Thakur 1974:142). The deprived royal patronage and general degeneration of the country may have caused economic depression to the monastery but not annihilation. The Buddhist monasteries were flourishing when Huan Tsang visited Kaśmir in the 7th *c.* CE.

The old Karakuram road was abandoned in 6th *c.* CE (Kuwayama 2006: 118). No more could we find any mention of Gandhāra-Balor-Tashkurghan route in the itineraries of Buddhist pilgrims travelling from Central Asia to Gandhāra or vice versa. Jinagupta (554-557 CE) and Dharmagupta itineraries (570s CE) recorded in the second book of *Tang Gaoseng Zhuan*, manifest that Gandhāra was not a terminal anymore. Highway connecting India with Central Asia shifted to west. Caravans from India by passed it to reach Kapiśi and Bamiyan. The Turkish troops did not penetrat into the Gandhāra region but a series of their attacks weakened the Hephthalite power in the western Central Asia. It broke the ties between Tokharistan and Gandhāra thus resulting the economic desolation in the area. The trade routes became insecure. Huan Tsang reported old trade routes in the valleys south of Hindu Kush, where once Buddhism had flourished, to be out of use due to anti-Kali policy of Bhagavats and Pāśupatas in Gandhāra and Uḍḍiyana. He reported that the royal family was extinct in Gandhāra and the Kapiśian deputies governed few people there (Kuwayama 2006: 126).

The favourable environment was a crucial factor in smooth trafficking on Silk Road. When the cities of Loulan and Niya in South Tarim Basin faced an environmental degeneration, the main artery linking North-western regions and China disappeared. Gandhāra lost its relevance as a key hub of International trade. With the shift of trade routes, the economic hub was transferred from Gandhāra to Central Asia. The Sogdians, came to dominate the International trade as well as the Buddhist channels. With formation of Gupta Dynasty (4th-6th *c.* CE) the trade routes, as well as the religious and intellectual supremacy shifted to South. Elverskog (2010: 30) mentioned that Muslims found the area in a dilapidated state when they invaded shortly after Huan Tsang pilgrim.

(v) The emergence of Tantric Buddhism in Gandhāra: **Tantric or Vajrayāna Buddhism was the last phase of Buddhism in Gandhāra (Joshi 1986:235). Virardi (2011: 165) argues that Mahayana monasteries in north western areas degenerated due to spread of Vajrayana Buddhism. For instance, Bisak Banda in Swabi district was abandoned in 4th**

_c._ CE, due to collapse of a network of Buddhist institution and spread of Vajrayāna Buddhism in the area. Ranighat, being located at a secluded place was able to survive for a longer period. Lewis (2000) maintains that devotion to bodhisattvas in Mahayana Buddhism had already cultivated an intricate system of daily, monthly and yearly ritualistic practices. The multiple manifestation of Mahayana bodhisattvas yielded supernatural powers. Bbodhisattvas at seventh stage *acala,* could transform themselves in various body and voice forms. Later stages of Gandhāra art at Mohammad Nari, Takht-i-Bahi and Loryan Tangai represents copious bodhisattva figures in statues, triads, and steles in complex scenes, mimicking vigorous Mahayana activities at these sites (Rhi 2006: 174-75). These bodhisattvas equated the Brahman devas in 'rescuing devotees, bestowing boons, and controlling nature' (Lewis 2000: 9-10). Special ritual guide books were composed for devotion (puja) and its rewards in this world and also in hereafter. Vajrayana endorsed the rituals 'as a fulfilment of early Mahayana praxis', leading to a Mahayana-Vajrayana Buddhism (Lewis 2000: 10) Songyun reported the corruption of Buddhism due to the magical practices (Thakur 1986:73). Mizuno (1969:41) points out that the fall of Buddhism took place due to the emergence of the Tantric mysticism.

Huan Tsang records that the Māhāsañghika brethrens had a whole *Pitaka* (book) of *dhāranis* in the form of vidhyāharapitaka or Dharani Pitaka. The archaeological evidence corroborates the literary evidence. For instance, the Gilgit manuscript also contains *Sarvatathāgathādhisthāna-vyu,* the semi-Tantra Buddhist text. The *mantras* were written on birch bark and used as amulets in the 6th *c.* CE. The Manju-śrimāyu-dhārani contains *mantras* to numerous deities. The Manju-śrimūlakapasūta, a ritual text of Mantrayana dealing with a number of gods, goddesses, their iconography, mudras, mantras, mandalas and popular worship, was written in *gāthā* dialect (the typical Gandhāra Prakrit) (Joshi 1986:251). Moreover, the Monument 69 at Ghazni represents a *mandala* structure, while its Brāhmī inscription has been interpreted as a dedicatory *mantra* in favour of *Ghama* or *Yama* (Parlato 1979:265). The esoteric teachings of Tantric Buddhism became mixed up with Śaktism, the worship of female god and a popular faith of Indian sexualism by about 8th *c.* CE.

The Tantric Yoge originated from Bengal in the Northeast and Uḍḍiyāna in the Northwest, as evidenced by King Indrabhuti, Padmasambhava and the early *Siddhas* (Spagnesi 2006: 152; Virardi 2011: 164). Strong Tantric traditions were reported in Uḍḍiyana since 6th-7th *c.* CE and in Kaśmir in the later centuries. The Tantras mention Uḍḍiyana as one of the four *pithas,* original centres of the Tantric Buddhism long before

the 7th *c.* CE. The other three centres of esotericism were Kamakhya, Srihatta, and Purnagiri where Śakti worship had been first developed. The Tantric Mandala constituted twenty four holy sites; among them four were located at Uḍḍiyāna. Huan Tsang also mentioned that the people of Uḍḍiyāna held magical arts and spells in high esteem (Barua 2000:160; Ch'en 1973: 326). Padmasambhava, the Apostle of Buddhism in Tibet, Indrabhutti, the celebrated Tāntrika author, Lawapa, the rescuer of Yogini tantras, the monk Jivaka Odiyānaka all are represented as coming from Uḍḍiyāna. The literature of a new movement in Uḍḍiyāna called as Tāranātha provides information on the previously present Tantric Buddhism in the area. Saraha is said to have been one of the earliest teachers of Tantric Buddhism in Uḍḍiyāna (Joshi 1986:260; Warder 1990:441). Śri Kambhula learnt Yogini Tantras in Uḍḍiyāna (Roerish. Bk x. 754). Virūpa, the earliest of the line of the teachers of the movement of Anuthara yoge Tantras (8th *c.* CE) wandered few places, including Uḍḍiyāna. King Indrabhūti of Uḍḍiyāna was a master of Tantras and had collected its texts. He was taught by Sarouha Padmavagra, identified with Padmasambhava. Several female Tantric Masters were reported in 8th-10th centuries CE (Kragh 2011: 88). The line of teachers to which Saroruha belonged was founded by Yogini Sahajasiddhi, daughter of a baron, who ruled over a part of Uḍḍiyāna. Another line of teachers in Uḍḍiyāna began with Vajraghanta, his consort Vajrayogini and Aśvapada. A student of Vajraghaṇṭa was Kumbala. Jālandhari, a contemporary of Kambala, was a residence of Sindhu. He visited and taught at Uḍḍiyāna and finally settled in Jalandhara. The Mantrayana teachers in Uḍḍiyāna composed the 'diamond songs', e.g., *dohākośas,* anthologies of *dohās, Caryā gitikoṣa,* composed of fifty songs (*gitis*). All these texts are preserved in Apabhraṃśa, now extent in Bengali language (Warder 1990:443). Lakṣmī younger sister of King Indrabhūti was most outstanding among female Tantric masters. Four Tantric works are ascribed to her, i.e., 'The Accomplishment of Non-duality', 'Methods for Accomplishing Vajrayoginī', and 'Guide to the Accomplishment of Inborn' (Kragh 2011: 90-91).

Tucci (1940) relates 13th century travel itineraries of two Tibetan pilgrims, i.e., Orygyan pa and sTagt'anras pa, extracted from the biography *'C'oiḣbyuṅ'* by Padmadkar po, one of the most famous biographer of Tibet. Swat valley was called as 'land of *dākinīs*', denoting to *devas*. The word literally means 'capable of flying', signifying 'ferocious, carnivore, female attendant deities linked with the cult of Mother goddesses' (Kragh 2011: 86). Orygyan pa travelled this magic land to collect Tantric literature and encounter *dākinīs* for spiritual advancement. Orygyan pa reported small Hindu principalities in Uḍḍiyana and also in Salt Range. Rajadeva, a Hindu or Buddhist raja

ruled over Udegram, while Pantsagaya, a Muslim king ruled over a vast territory, including Swat and Buner. Orygyan pa reported the latter as very liberal and disposed towards the Tibetan pilgrim. Nonetheless, witchcraft was in full swing and a magic form of Buddhism survived in the valley. Buddha's preaching were forgotten, and replaced by teachings of Indrabhuti and Kambalapā (Tucci 1940: 38-40). Kaśmir also took active part in development and spread of Tantric Buddhism. Elverskog (2010: 43) mentions that the Buddhist teachers moved to Kaśmir in 8th *c.* CE to offer their knowledge and resources to the rising Karkota Dynasty of Lalitaditya. Kaśmir remained a vital region for Tantric Buddhism till 14 *c.* CE. We also find evidence for the presence of Tantric Buddhism in Sind. The Hevajra Tantra (*ca.* 5th *c.* CE) lists Sind as one of the important centre of Mentrayana Buddhism (Macleans 1989: 11).

(vi) The Muslim invasion and the destruction of Gandhara monasteries: **Elverskog (2010) and Singh (2009: 46-48) highlighted that the Colonial scholars have painted peaceful Buddhist panorama and vindictive Muslim intrusions into it. For instance, Morgan (1956: 48) narrated that the Muslim 'vandals' 'indiscriminately massacred' the people and burned the monasteries. Alexander Cunningham (1854) noted the silence of ancient *Sanskrit* sources on Buddhism. He was well aware of different Buddhist sects and their resentment towards each other, the evolutionary changes in their religion, the emergence of Tantric elements and their effect on wholesome Buddhist precepts; but he did not describe them faithfully. Rather he highlighted the Muslim atrocities[1] as major factor for the disappearance of Buddhism in the Indian subcontinent. T.W. Rhys David laid the destruction of Nalanda and Sārnāth at the door of Muslim invaders (Rhys: 1896: 91). We argue that such claims did not seriously consider the well-built socio-economic realities of Gandhāra and Central Asia in 7th *c.* CE. The expansion of Caliphate in Northwest India and Central Asia was more to control the financial resources and trade routes, rather than to convert people to Islam. Even in the heartland of Iraq and Egypt, the local population largely remained non-Muslim for some centuries after first inception of Islam, not to speak of distant lands of Gandhāra and Central Asia. The actual rate of conversion to Islam remained very slow till 11th *c.* CE. According to *Kitab Surat al-Ard*, the majority of inhabitants were non-Muslims in Sind and the Muslims represented only a ruling minority (Elverskog 2010: 279). The**

[1] Cunningham compared the Buddhist and Islamic traditions as, 'Islam was propagated by merciless edge of sword', and 'Buddhism by the pervasive voice of the missionary' (for details see 'Cunningham. The Bhilsa Topes or Buddhist Monuments at Central India: Comprising a Brief Historical Sketch of the Rise, Progress and Decline of Buddhism; With an Account of the Opening and Examination of the Various Groups of Topes around Bhilsa. London. 1854. 1997 reprint ed. New Dheli)

aristocracy and ruling elites, as well as the Sogdian merchants were the first convert to Islam in Central Asia. The whole area came under sway of Islam only in 15th *c.* CE, due to teachings of the Muslim saints (Foltz 1999: 14).

The notion that Buddhism ceased in the Indian Subcontinent due to Muslim invasions has variously been challenged by the researchers. Numerous scholars showed that majority of the Muslim rulers were tolerant and there was little tension among diverse religious groups under their rule. Most of the Northwest India was brought under the Muslim control by treaty (*sulh*) and not by force (*anwa*). Baldhuri states that in 9th *c.* CE the city of al-Rur was conquered by *sulh* with the condition that Muslims will not kill the inhabitants nor enter their temples. The Muslims kept the local ruling elites in place and allowed them to practice their traditional religions. The early Muslim states continued the policy of allotting three percent of tax revenue for non-Muslim religious mendicants. The Buddhist temples were important repositories of information and essential skills, such as writing at that time and Muslims recognized the central role of Buddhists in the local economies. The Buddhist scholars worked for Muslim rulers, and they took advantage of rich literary, scientific and philosophic traditions of the Buddhists (Elverskog 2010: 53, 60). Virardi (2011: 163) maintains that the relationship between Muslim military actions and the end of Afghan Buddhist sites is doubtful. Same is the case with inroads of Ya'qub bin Lais and fire at Tapa Sardar Narenji. The Turk elites supported Buddhism in Afghanistan in 666 CE.

China entertained political relationships with India, including Gandhāra, Uḍḍiyāna and Kaśmir from the 7th-8th *c.* CE. Bakhshi & Lipi (2000: 260) report a band of thirteen Indian monks coming from Northwestern India, Uḍḍiyāna, Varendra, Kaśmir, Western India and Central India to China. Bamiyan remained functional till 13th *c.* CE. Monks regularly travelled on Silk Road till 11*c.* CE, after which Central Asia passed out of the direct control of the Chinese central authority and roads were blocked by the marauding tribes. Moreover, India was divided into small states, and Buddhism had already weakened due to continuous mysticism and magical exorcism (Bagchi 1981: 102).

Andre Wink (2002) pointed out that Buddhism persisted in Sind long after the penetration of Muslim forces in Northern India. Elverskog (2010: 48) refers to a number of Buddhist inscriptions of 11th *c.* CE. Manikyala possibly survived till 8th *c.* CE. Cunningham dates the first structural phase of Manikyala to first few centuries of Christian Era and second to 8th *c.* CE (Singh 2004: 71). Dar (1970-71: 9) also reported 8th *c.* CE coins in the relic casket at Mankyala. The Tibetan records and the

archaeological evidence indicate the continuation and prosperity of the Buddhist monasteries in Kaśmir, till 12th *c.* CE (Sen 2002: 61). Trade remained in hands of Buddhists till 8th *c.* CE. The North-western Provinces and Central Asia went out of hands of Muslims in 9th *c.* CE and were ruled by the local dynasties.

The Indian Subcontinent once again came in sway of Islam by Mehmood of Ghazna in 10th *c.* CE. The decline of Swat monasteries had already been advanced due to vigorous Brāhman renaissance. When Sultan Mehmood Ghaznavi marched from Peshawar into Swat and Bajaur, Buddhism had already been in vain for about two hundred years. The catastrophic flooding in the 7th *c.* CE also destroyed many monasteries. The Buddhist monasteries, once dotting the banks of River Swat were already ruined, or in varying state of dilapidation, when Huan Tsang visited the area. The Mehmood's invasions were no doubt violent at times and the Buddhist monks fled towards Kaśmir, Benarus and China (Elverskog 2010: 45). Nonetheless, we do not find any historic evidence for a systematic anti-Buddhist policy of Mehmood Ghaznavi. Contrary to it, the court poets and historians of Mehmood Ghaznavi presented Buddhism favourably in their accounts, e.g., Asad Tusi describes a Buddhist temple outside Kabul in *Garshap Nama* with awe and reverence. A.S. Malikian-Chirvani maintained that Mehmood found the house (*khane*) of the Buddhist shrine (*bot-khane*) as fine as a spring (Allchin 1984). The court poet Unsuri praises the gigantic Buddha's statue in the Bamiyan Valley[1]. The Persian poets of 11th *c.* also revered the figures of Meitreya for its unparalleled elegance in the pure beauty of halo and its moon shaped face. For instance, Ayyuqi in his poems *Varque* and *Golshah*, use the words *bot* with a positive connotation for Maitreya (Berzin 1996).

Mohammad Ghauri's invasion (12th *c.* CE) was the third Muslim encounter with the Indian Subcontinent. The Ghauri's invasions were more violent than Mehmood Ghaznavi's. Nonetheless, the stories of temple destruction were exaggerated in the Hindu and Buddhist accounts. The Muslim historians also overstated the assaults to show up the power and authority of Mohammad Ghauri. The Ghauri's troops destroyed eighty temples out of several hundred or possibly thousands of temples from Afghanistan to Bengal and Tibet. Among these eighty two belonged to the Buddhists. India was already far from a Buddhist country in 12th *c.* CE. The eminent monks had already moved far to east and north. The monastery of Nalanda, Odantapuri and Vikramasila were adept to Tantric Buddhism. The Ghaurids' troops sacked these temples, but soon the Buddhist King of Magadha, Budhasena forged alliance with the

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[1] The Bamiyan statues survived 13 centuries of the Muslim rule; finally to be destroyed by the terrorists in 19th century

Muslims and restored Nalanda University. Nalanda continued functioning till 13th *c.* CE, when some of its monks travelled to the court of Kablai Khan to propagate Buddhism. Buddhism somewhat survived in India till 17th *c.* CE. The event of Nalanda University gave boon to Tibetan Buddhism. The Tantric monks travelled to Tibet and caused a revival of Buddhism there that survives to date (Che'n 1957). The Colonial British chronicles of the Muslims' burning and looting of Nalanda University later became a tradition to be repeated in almost every scholarly work on Buddhist monasteries in India without a serious investigation into the matter. Elverskog (2010: 2 & 149) argues that Muslims were portrayed as 'destroyers of Buddhism', 'overlooking more than one thousand years of Muslim-Non-Muslim interactions' in Indian subcontinent, Central Asia and other parts of Asia.

5.2 The Post 7th *C.* CE Spread of Gandhāra Legacy**: The Buddhist institutions have left an indelible mark on culture and education of later period Gandhāra and Lower Indus Valley. The Māhayāna School migrated to Central Asia, China, Tibet, Nepal, Thailand, Manchuria, Mongolia, Korea and Japan, while the Hinayana School transferred to Ceylon, Burma and Siam. The art, architecture and urbanised towns in the Far Eastern countries bespeak of the strong Buddhist influence. The Buddhist monasteries were a prologue for Muslim *Madrassahs* (schools) in Central Asia (Elverskog 2010: 103; Pant & Shūji Funo 2007; Sen 1998: 88; Takashi 1981).**

The Buddhists were influential and well represented in the Indus delta region at the time of Muslim conquest of Sind in 7th *c.* CE. The Muslim historians of the Arab conquerors not only documented the Buddhist practices in Sind, but also compared them with Islamic traditions (Ball 1989). Sind was ruled by Rāis Dynasty (mid 7th *c.* CE), but their Governors and spiritual leaders were the Buddhist priests. The Brāhman Chach (644 CE) usurped the Buddhist hegemony, but patronized the Buddhist Governors. The Provincial Government remained in hands of Buddhist Priesthood during rule of his son Dahir, who had a Buddhist *vizier* called as 'Budhiman' or *Sameni*. The Buddhist monks entitled *Bhagū* (or *Bhikku*) were chief of the Provinces of Siwistan and Budhiya, and town of Nerūn. Extensive Buddhist remains were reported from Siwistān (identified with Sihwānon the right bank of the Indus); also the sites of Medieval Nirūn at Shakurpur to South of Hyderabad and Halāya near Jarak. The Province of Budhiya or Budha, with its capital Qandābil was located at modern Gandāvam Kachh (Ball 1989).

The term *Saminiyah* was used by the Medieval Muslim writers of Arab Sind for the Buddhists. The word is derived from Pali *samana*[1], a form actually occurring in a fragmentary inscription found at the Buddhist monastery at Mohenjo-Daro in Sind. The term *Nava vahar* is used in *Chachnama* for the Buddhist monasteries. *Nau Bahar*[2] was existent in Brāhmanabad. Buddah Rakkū, the chief monk of Sāwandī in the suburbs of Brāhmanabad was the *qutb* (the spiritual leader) of the Sihari Governor of Brāhmanabad. Another *Nau Bahar* existed in the Fort of Alor. The Arab chronicles mention a bejewelled and bedecked horse cult both in *Nau Bahar* of Alor and Balkh. The temple of Dibāl, generally considered as a Hindu temple, was a major Buddhist stupa. The Buddhist stupas are also identified at Mirpur Khas, Thul Mir Rukan, Sudheran-jo-dhado and Jarak (probably 4th *c.* CE), Saidpur and Sui Vihar (Macleans 1989: 5).

The Las Bela, Gondakahar or Shahr-i-Roghan is associated with Gondrani Caves. The cave complex of Gondrani, Northwest of Las Bela in Makrān, has Buddhist characteristics. They consist of fifteen hundred shallow artificial chambers, along two km, in a gorge around River Hud. Some cave complexes in Persian Gulf littoral have possibly represented the off-shoots of Sind Buddhism. The 8th-9th *c.* Buddhist seals were found in Kachh, the area of ancient Budhiya (Ball 1989: 122-128).

During Ummayad Caliphate (661-750 CE) the Buddhist monasteries were present from Silk route to Sind port. Sind had a mixed population of Hindus, Buddhists and Jains at the time of invasion of Mohammad *bin* Qasim. Huan Tsang reported more than 400 monasteries and 26,000 Buddhist monks in Sind. The Buddhist constituted the rich merchants, while Hindus were the farmers. *Chachnama* relates that the Samani Governor opened the gates of the city of Nirun to the Muslim army, asked for *aman* (peace) and offered tribute to them. Mohammad *bin* Qasim provided the Buddhist and the Hindu subjects the status of the protected subjects (*dhimmi*), and kept Siwistān, Nirun and Brāhmanabad under their Governorship (Wink 1991: 148).

The Buddhist communities controlled extensive trade network on Tūrān and Makran coasts. The Buddhism of Sind and Makrān had strong mercantile connections all over Asia, before and under their Governorship. Dibal, the major monastery had sea trade connections with Makrān, Turān and Budha, prior to its cession of Sassanian Iran in 5th*c.* CE. Armābil and Qandabil, Makrān had maritime ports with wealthy merchants.

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[1]***Sanskrit Śramana***

[2]**The Persian variant of *Nava vahar* or *Nava vihar***

Qandabil was a great market town. Budin was a mercantile quarter with strong trade connections in Khosaran. *The Periplus of the Erythraean Sea* provided clues that Makrān remained an important link in between east and west since 2nd *c.* BCE. The Buddhist monasteries at that time were renowned for housing the artisans who were expert in skilful cutting of the semi-precious and precious gem stones. The Byzantium preferred trade route passed through Sind to Ethiopia and then by land, before the Arab conquest of Sind. Many Buddhist merchants and artisans converted to Islam. However, we find clues to the continuation of Buddhist monasteries in Sind in Pala Dynasty inscriptions as late as 12th *c.* CE (Ball 1989: 128; Kennedy 1981: 70).

The Muslim chronicles of 7th *c.* CE variously refer to Qandahar, which historians invariably interpreted these references as Qandahar in Afghanistan. However, Ball (1988: 116) carefully analyzes the Muslim chronicles of 7th *c.* CE, and maintains that at least seven urban centres must have been written down as Qandahar with reference to Muslim invasions in India, all associated with Buddhism. Ball (1988: 116) ascribes at least two to Sind and one to Gandhāra proper. The geographical clues provide evidence that the Qandahar of Ibn Muffarrigh (689 CE) and that of the accounts of Ibn Khurrādabhih were located in Sind. One of the most important reference to Qandahar is found in relation to Arab raids during the Caliphate of Mu'áwiya, almost invariably interpreted as Qandahar in Afghanistan except Caroe, who interpreted it at Gandhāra. Aly'aqubi (872 CE) in his *Tarikh* (history) describes Qandahar in Gandhāra. Idrisi refers to a city of Gandhāra as Qandahar that may be *Wayhind* (probably Lahor near Hund) as capital of Gandhāra at that time. The Qandahar of Afghanistan is first time mentioned in Nisāwi's accounts of Mongol invasions of 13th *c.* CE. The Persian word Qandahar may be corruption of the Persian *Qand-Vihara*[1], meaning 'city of the Buddhist monasteries'. *Chachnama* refers to *Kan-vihār*, i.e., 'Fortress of the Monastery' in Sind (Ball 1989: 137). The Muslim chronicles describe the beauty of the statues, temples and gardens of these Qandahar with awe and respect, and not with hate and contemplation for idol worshippers. The poems of Farrūkhi Sistāni CE 1037-38, refer to beauty of Qandahar. Azraqi 1072-73 CE refers to thousands of domes (possibly stupas) from Kaśmir to Qandahar (Gandhāra). The poet Manuchihri (11th *c.* CE) also refers to Gardens of Qandahar.

The Great monastery of the entire region of Central Asia was *Nava vahar* in Balkh, the main city of Bactria. It served as the principal centre of higher Buddhist learning in Central Asia with satellite Buddhist monasteries in Bactria and Parthia. *Nava vahar*

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[1]Persian *Iqand*, or *Kand* or *Kent*, meaning city

represented a mini-state of Barmak family, occupying an area of 740 sq m all around it. It was a centre of the highest learning and it admitted only those monks who had already composed texts of their own. Several teachers in Khotan were the graduates of *Nava vahar*. I-Ching visited *Nava vahar* and reported it flourishing as a Sarvāstivada centre of study. Huan Tsang reported *Nava vahar* as one of the holiest pilgrimage sites in area. He also mentioned *Nava vahar* for its once celebrated scholarship and also for the beauty of its *bodhisattvas*, especially Meitreya, draped in silk robes and adorned with jewel ornaments. The Persian poetry often used the simile of *Nau Bahar* for magnificent palaces (Berzin 1996).

The constellation of *Nava vahar*s left their traces in different places in Central Asia. The cities of Samarkand and Bukhara had main gates named as Nau Bahar in 10th *c.* CE. *Farhang-i-Jughrāfiyā-yi Irān*, gives a list of fifteen villages bearing the name *Nau Bahar*; or longer names incorporating it, or palaces of the same name. The old Buddhist monasteries in Central Asia retained a reputation as educational centres for centuries after they lost their purely religious identity. Atā-Malik Juvainī, a 13th *c.* historian of Mongols mentions that the derivation of Bukhara is from *bukhar*, which means 'a centre of learning' in the language of Ughuir and Khitayan where the places of worship are called as *Bukhar*' (Bulliet 1976: 144). He further mentions (145) that Atā-Malik Juvainī actually meant the Sanskrit word *vahar*. The architecture of the Buddhist monasteries in Bukhara may have an influence on the architecture of later Muslim *madrassahs* (schools) in the area (Glassé & Houston 2002: 302). The same may be true for the small cubicles in female *madrassahs* in Swat have close resemblance with underground chambers of Takht-i-Bhai (personal communication. Professor Dr. Mohammad Farooq Swati).

The monks of *Nava vahar* fled to Kaśmir and Khotan when Hajjaj *bin* Yousaf sent General Qutaiba to Bactria in 715 CE. The Kaśmiri Buddhism took a boon when Karkote King Lalitaditya (701-738 CE) built new monasteries in Kaśmir to accommodate the learned refugees. Nonetheless, *Nava vahar* was soon flourishing again (Berzin 1996). It remained open and flourishing under the early Muslim rule in Central Asia. Buddhism existed side by side with Islam in Central Asia until 1000 CE when its decline was observed by Al-Bīrūnī (Glassé & Houston 2002: 302). Al Kermani, an Ummayad author, visited *Nava vahar* at the beginning of 8th *c.* CE. His accounts are preserved in Al Hamadhani's *Kitab al Baldan* (Book of Lands) of 10th *c.* CE. Ibn al Fakth also described the *Nau Bahar* monastery. Yaqut describes that later on, the

Buddhist cloister was transformed into a fire temple by the Sassanian Empire (Houtsma 1913-1938: 663).

One line of the Barmakids converted to Islam, while another line remained Buddhist for long period of time. Yahya *bin* Khalid Barmaki[1], the minister of Abbasid Caliph Harun-ul-Rashid (ruled 786-808 CE) was the grandson of one of the Buddhist administrative head of *Nava vihar* at Balkh. His grandfather was married to the daughter of the King of Saghāniyān, a principality North of Balkh (Bulliet 1976: 143).The Arab geographer Ibn al- Faqīh has left the most detailed account of the *Nau Bahar* at Balkh. He pointed out that Barmaks, the Chief monks of the monastery possessed of extensive land holdings, and exercised broad political connections and influence. The kings of China and the Kābulshāh were the devotees of the cult of *Nau Bahar,* where they came to pilgrimage. Khalid Barmaki, the father of Yahya *bin* Khalid, a Muslim by birth, acquired the hereditary knowledge. He was skilled in astronomy, philosophy, and medicines. He cured the prince Maslama *bin* Abd'al-Malik, and became the head of *Diwan al-Kharādj*i in 749-50 CE. He was also an adviser of the Caliph al-Mansur in the foundations of the circular city of Baghdad (763-764 CE). Besides numerous buildings in Baghdad, the laying down of the foundations of the town of Mansura in Tabaristan is attributed to him. Yahya *bin* Khalid became a minister not only due to his extraordinary personal competence but also due to his politically strong Buddhist priestly background. The Barmak family also made unusually successful Governorship in Sind (Ahmad 1969: 55; Houtsma 1913-1938: 664). Yahya *b.* Khalid also visited India (Sind in all probability) to collect pharmaceuticals and to speak to doctors and scholars. He wrote a detailed report of his visit; the original being lost, nonetheless, its references could be found in Ishaq al-Kindi's accounts of 9th *c.* CE and Ibn al- Nadim *Kitab al-Fihrist* (10th *c.* CE). He described the details of the Buddhist statues at the temples of Hyderabad, Central India and Sun Temple in Multan, where the pilgrims came from as far as South East Asia. The report was an attempt to clarify the ideas and concepts of Buddhism to Muslims, detailing the carving, height, postures, smile and the pilgrims to the Bamiyan Buddhas; *Jun-bukt* (Gold Red Buddha) and *Zun bukt* (White Buddha). The Buddha's statues were present in every house. The report especially details Meitreya images and provides details of materials to be used for making these images. He described sixteen sects of Nikaya traditions and Māhayāna Buddhism. Ibn Nadim also puts the Buddhist ideas in Muslim terms, with same spirit of understanding. The Muslim historians variously describe *Nava vahar* and their custodians with religious tolerance. Ibn-i-Faqih compares

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[1] Barmak from *Sankrit Pramukha* meaning priest

the Barmakids with Quraish, the guardians of K'aba. Yaqut al Hamawi (13th *c.* CE) makes a clear connection between pilgrims to *Nau Bahar* and K'aba (Elverskog 2010: 60 & 66). *Bilawar and Budasaf*, the populat Arabic text, being continuously referred in early Muslim literature and an important part of Sufi literature was a retelling of Buddha's life. Some *Jataka* and parables[1] presented word by word translations of the Buddhist works. Al-Gardezi in his *Zain-ul-Akhbar* (11th *c.* CE) notes Buddha's focus on reason and importance of meditation. Shahrastani's *Kitab al-Milal-wa-n-nihal* (1125 CE) compares Buddha with al-Khizr, as latter is famous for his quest for the mystical Enlightenment. He translates a *boddhissattva* as 'One who is sent by God'; later proved to be a widely circulated term in the Muslim literature (Elverskog 2010: 60, 66, 71, 88).

Yahya *bin* Khalid Barmaki was a physician of Caliph Harun-ur-Rashid and was the patron of physicians and translators of Buddhist medical works into Arabic and Persian. The Sanskrit books on medicines were imported directly from Indus Valley to Iraq and translated into Arabic (Ditcher-Barnburg 2003: 300; Prioreschi 2004: 110; Sayili 1980: 280). They sent scholars to Sind to study medicines and pharmacology and invited the Buddhist monks to Baghdad. Manaka (*Mankhaor Minikya*) was proficient in *Ayurveda* and other Indian sciences. He was appointed as a Chief Physician at the Royal Hospital of Baghdad. He translated several books to Persian and Arabic languages. Ibn Dhan, the son or descendent of Bhala was a head of the hospital of Yahya *bin* Khalid. Sālih,was a famous practitioner in Baghdad. Some of the Arab medicines were founded on basis of his translations by about 800 CE. The book *Kitab-al- Frishta* included a list of the renowned Buddhist works (Said 2003: 321). Ali *bin* Rabban al Tabari (c. 850-CE) in his *Firdaus-al-Hikmat* (the Paradise of Wisdom) describes various Indian medicines[2] that were introduced in Arab World by Indians in Baghdad. The medieval European medicine was in turn based on translations from Arabic World (Hunter 1903: 64-65).

The Arabian physician Rhazes (882 CE) in treating the properties of ginger and other drugs, quotes an Indian writer Sindexar or Sindicara; identified with Vagbhata II of Sind. He was also known as Caraka or Cara. He was the son of Simha Gupta, Prince of Physicians, an inhabitant of Sind. His work is based on the summary of Vagbhata the Elder. His treatise, *Vāgbhata Astanā Hrdaya Samhita* (The Compendium on the Heart of

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[1] For instance, the *Jātaka* of Devadatta was translated as 'King's Grey Hair', and the parable of blind men describing the elephant.

[2] For instance, *Jauz Hindi (coconut), Tamar Hindi (tamarind), Ud Hindi (aloe wood), Mileh Hindi (Indian salt), Kammun Hindi (Indian cumin), Qust Hindi (Costus indica), Halelaj (Chebulic myrobelan), Balalaj (Belliric myrobalan), Amlaj (Emblic myrobalan), Saddhij Hindi (Mala bathrum indica).*

the Eight Branches) was one of the Indian treatises translated by the order of Caliph al-Mansur. Five commentaries were written to *Vagbhata II Samhita*. The commentary of Mādhava called as *Rugviniścaya* on pathology was most popular work of the Indian medicines (Kapoor 2003: 252, 495). During 7th *c.* CE many other text books were taken to the Muslim world including those of *Ashṭanga Samgraha* of Vagbhata.

Kanka, the author of *Bhela-Saṃhitā*, the sixth student of Ātreya, was also probably called to Baghdad at the time of Caliph al-Mansur (773 CE). Kanka took with him certain Indian books to Baghdad including *Brahma Sphuta, Siddhānta of Brahmagupta* andm*Khāndā Khadiyaka.* Ibrāhim-al-Fazāli and Yaqut bin Tariq translated Brahmagupta into Arabic as '*Sind Hind Al Kabir*' with help of the Sindhi monks by order of the Caliph. The surviving fragments of the *Sind Hind* indicate that the main source possibly belonged to the Brahma Paksa. *Sind Hind al Kabir* elaborates the decimal place value numerals and decimal arithmetic of the system called as *Brahma Sphuta Siddhanta*, and names them as 'Indian Calculation' (*Hisab-al Hind*). Later on, it became a mandatory part of arithmetic of the Islamic World (Plofker 2009: 256; Vassiliades 2000: xi). Al-Khwārzami compiled his *Zij* on the basis of al-Fazāri's *Sind Hind* (al-Khwārzami and al- Fazāri, being the best known astronomers of their time). A manuscript discovered at Ankara, revealed an astrological history of the Caliphs, entitled as *Kitab-Kaṅka al-Hīndī* (Agarwal and Lalit *n.d*). Ya'qūb bin Tāriq and Māsh' Allāh, also translated the Indian astronomical treatises, in Baghdad. Al-Bīrūnī in his Encyclopedia *Tahqiq mā li' l-Hind* (Inquiry into what is to be found in India) gives full information about all astronomical books of India and their Arabic translations. The Part VII, called as *Maqāla* (discourse) IV in the *Firdaws al-Hikme* (Paradise of Wisdom) of Ali *bin* Sahl Rabban al-Tabari, deals in thirty-six chapters with the medicines based on Charaka Samhita, Suśruta Samhita, Nidana and Vagbhata's Ashṭanga Hridaya Samhita (Akhmedov 2003: 193; Elverskog 2010: 61; Said 2003: 320).

A large number of works on science in *Bait'l Hikmat,* built by al-Mahdi (rule 775-785 CE) were the translations of *Sanskrit* works, translated by Hindu and Buddhist scholars of Sindh. Kītab-ul-Bud (Buddha's previous life stories) was the translation of the Asvaghosa's *Jatakamala* and *uddhacarita.* Aban-ul-Lahiki (750-815) wrote down an epic named as *Kitab Belwa wa Budhasaf.* The work was later on passed to legend of *Barlaam and Josephat* of Christian and Jewish World. During al-Mamun reign, *al-Jahiz* published in Baghdad Fakir as *Sudan ala l' Bidan* (The Superiority of Black over White) contained praise of the great cultural achievements of India (Berzin 1996). In his *al-Qānūn al Ma'sūdi* (Canon of Sultan), Al-Bīrūnī divides the Muslim scholars into two

groups 1), the adherents of Hellenistic traditions, and 2), the adherents of the Indian traditions. The former belonging to Gandhāra, as Hellenistic traditions did not penetrate into Central or South Indian territories. Al-Bīrūnī describes the trigonometric methods to measure with the observations of eclipses and experiments he had made in the fort of Nandana (present day Gujarat in Pakistan) at sometimes between 1020-1025 CE (Akhmedov 2003: 207).

We conclude that the Gandhāra monasteries collapsed with their academic impotency that set in gradual decline of Gandhara civilization. The study critically analyzed the disintegration of Gandhara monasteries with regard to Muslim invasions, and concluded that not only the invasions, but also the compound effects of the external factors, e.g., environmental and social, inherent structural weaknesses and some elements in doctrine initiated decay in the Gandhara monasteries. It also brought forth that the Muslim rulers invited the Buddhist teachers in their Caliphate and translated their scriptures in Arabic. Several important Buddhist treatises described under the generic term 'India' were taken from Sind to the Arab World in 8th-10 centuries CE. The Gandhāra educational enterprises spread to Europe through the Arabic translations. The Buddhism persisted in Muslim occupied areas of ancient Greater Gandhāra and lower Indus Valley till 11th *c.* CE, after which it gradually absorbed in the dominant religious strands of Hinduism and Islam.

5.2.1 The Sindhi Buddhism in 7th c. CE: **Buddhism reached Sind at the time of Aśoke or even before that. Later on the Śakas, Parthians and the Kuśāns patronized the Buddhism in Sind. Although Buddhism was a dominant religion when Muslims invaded Sind in 7th *c.* CE, but still Buddhist Sind is the least studied area. The nature of Buddhism practiced in Sind was better documented with the Arab conquest of Sind. The Buddhists were influential and well represented in the Indus delta region at the time of conquest of Sind (Ball 1989).**

In mid 7th *c.* CE Sind was ruled by Rāis Dynasty, but their Governors and spiritual leaders were the Buddhist priests. The Brāhman Chach usurped the Buddhist hegemony in 644 CE, but he provided security and patronage to the Buddhist Governors and the monasteries. During the rule of his son Dahir, much of the Provincial Government remained in the hands of the Buddhist Priesthood. He had a Buddhist *vizier* called as 'Budhiman' or *Sameni*. The Buddhist monks entitled as *Bhagū* (or *Bhikku*) were the chief of the town of Nerūn, and the Provinces of Siwistan and Budhiya. The site of Medieval Nirūn at Shakurpur to South of Hyderabad and Halāya near Jarak, represent extensive archaeological remains of a Buddhist stupa. Extensive Buddhist remains were

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awe and respect, and not with hate and contemplation for idol worshippers. The poems of Farrūkhi Sistāni CE 1037-8, refer to the beauty of Qandahar, e.g.,

> ***"Your dwelling through its beautiful people is like paradise/And your palace like Qandahār in respect of its idols/i.e., beauties.***

or

> ***"Due to the handsome servants of your palace, every partition of your citadel is a Qandahar".***

Azraqi 1072-73 CE refers to thousands of domes (possibly stupas) from Kaśmir to Qandahar (Gandhāra). The poet Manuchihri (11th *c.* CE) also refers to the Gardens of Qandahar.

5.2.2 Muslim rule and Buddhism in Central Asia: **The Great monastery of the entire region was *Nava vahar* in Balkh, the main city of Bactria. It served as the principal centre of higher Buddhist learning in Central Asia with satellite Buddhist monasteries in Bactria and Parthia. *Nava vahar* had acquired a great state in the form of 740 square meters, all around it. The monastery and the land were in the hands of the Barmak family. It was a center of the highest learning and it admitted only those monks who had already composed texts of their own. Several teachers in Khotan were the graduates of *Nava vahar*. I-Ching visited *Nava vahar* and reported it flourishing as a Sarvāstivada center of study. Huan Tsang reported *Nava vihar* as one of the holiest pilgrimage sites in the area. He also mentioned *Nava vihar* for its once celebrated scholarship and also for the beauty of its *bodhisattvas*, especially Meitreya, draped in silk robes and adorned with jewel ornaments. The Persian poetry often used the simile for palaces that they were 'as beautiful as *Nau Bahar* (Berzin 1996).**

The *Nava vihar* monasteries left their traces in different places. The cities of Samarkand and Bukhara had mian gates named as Nau Bahar in 10 *c.* CE. *Farhang-i-Jughrāfiyā-yi Irān*, gives a list of fifteen villages bearing the name *Nau Bahar*, or longer names incorporating it, or palaces of the same name. The old Buddhist monasteries in Central Asian retained a reputation as educational centers for centuries after they lost their purely religious identity (Bulliet 1976: 144). The 13th *c.* historian of Mongols 'Atā-Malik Juvainī writes 'the derivation of Bukhara is from *bukhar*, which means 'a center of learning' in the language of Ughuir and Khitayan where the places of worship are called

as *Bukhar*.' Bulliet (1976: 145) points out that he was referring to the *Skvihar*. Bulliet further suggests that the architecture of the Buddhist monasteries in Bukhara may have an influence on the architecture of later Muslim Madrassahs in the area (Glassé & Houston 2002: 302). Albinia (2008: 158) comments the same for the female *madrassahs* in Swat and sorts out architectural semblance of the students' quarters with the underground chambers of Takht-i-Bahi.

The monks of *Nava vihar* fled to Kaśmir and Khotan. Hajjaj *bin* Yousaf sent General Qutaiba to Bactria in 715 CE. New monasteries were built in Kaśmir by Karkote King Lalitaditya (701-738 CE) to accommodate the learned refugees. It boosted the Kaśmiri Buddhism. However, *Nava vihar* was soon flourishing again (Berzin 1996). It remained open and flourishing under the early Muslim rule in Central Asia. Buddhism existed side by side with Islam in Central Asia until 1000 CE when its decline was observed by Al-Bīrūnī (Glassé & Houston 2002: 302). Al Kermani an Ummayad author visited *Nava vihar* at the beginning of the 8th *c.* CE. His accounts are preserved in Al Hamadhani's *Kitab al Baldan* (Book of Lands) of 10th *c.* CE. Ibnal Fakth also described the *Nau Bahar* Monastery. Later on, the Buddhist cloister was transformed into a fire temple by the Sassanian Empire (Houtsma 1913-1938: 663).

One line of the Barmakids converted to Islam, while another line remained Buddhist for long period of time. Yahya *bin* Khalid Barmaki[1], the minister of Abbasid Caliph Harun-ul-Rashid (ruled 786-808 CE) was the grandson of one of the Buddhist administrative head of *Nava vihar* at Balkh.His grandfather was married to the daughter of the King of Saghāniyān, a principality North of Balkh (Bulliet 1976: 143).The Arab geographer Ibn al- Faqīh has left the most detailed account of the *Nau Bahar* at Balkh. He pointed out that the Barmaks, the Chief Monks of the monastery had broad political connections and influence. The kings of China and the Kābulshāh were the devotees of the cult of *Nau Bahar*, where they came to pilgrimage. Barmaks were possessed of extensive land holdings. Khalid Barmaki, the father of Yahya *bin* Khalid, a Muslim by birth, acquired the hereditary knowledge. He was skilled in astronomy, philosophy, and medicines. He is said to have cured the prince Maslama *bin* Abd'al-Malik. He became the head of *Diwan al-Kharādj*, after 749-50 CE. He is said to have been adviser of the Caliph al-Mansur in the foundations of the circular city of Baghdad (763-764 CE). Besides numerous buildings in Baghdad, the laying down of the foundations of the town of Mansura in Tabaristan is attributed to him. Yahya *bin* Khalid became a minister not only due to his extraordinary personal competence but also due to his politically strong

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[1] Barmak from *Sanskrit Pramukha* meaning priest

Buddhist priestly background. The Barmak family also made unusually successful Governorship in Sind (Ahmad 1969: 55; Houtsma 1913-1938: 664).

The Muslim historians have variously described *Nava vihar* and their custodians with religious tolerance. Ibn-i-Faqih compares the Barmakids with Quraish who were the Guardians of the K'aba Yaqut al Hamawi (13th *c.* CE) makes a clear connection between pilgrims to *Nau Bahar* and K'aba (Elverskog 2010: 60, 66). Yahya bin Khalid also wrote a report to his visit to India to collect pharmaceuticals and to speak to doctors and scholars. His original report is lost. However, its references could be found in Ishaq al-Kindi's accounts of 9th *c.* CE and Ibn al- Nadim Kitab al-Fihrist of 10th *c.* CE also referred to the report. The Yahya's report was an attempt to clarify the ideas and concepts of Buddhism to make it comprehensible to the Muslims. He described the details of the Buddhist statues at the temples of Hyderabad, Central India and Sun Temple in Multan, where the pilgrims came from as far as South East Asia. He also provides the details of carving, height, postures, smile and the pilgrims to the Bamiyan Buddhas; *Jun-bukt* (Gold Red Buddha) and *Zun bukt* (White Buddha). The Buddha's statues were present in every house. The Meitreya images were especially highlighted in his report, providing the details of materials to be used for making these images. He described sixteen sects of Nikaya traditions and Māhayāna Buddhism. Ibn Nadim also puts the Buddhist ideas in Muslim terms, with same spirit of understanding as Yahya *bin* Khalid's. The Buddhist term *boddhissattva* was translated as 'Sent by God'; the term that widely circulated in early Muslim literature. The Arabic 'Bilawar and Budasaf' was a retelling of the Buddha's life. The text was popular in the early Muslim literature. The *Zain-ul-Akhbar* of Al-Gardezi (11th *c.* CE), notes Buddha's focus on reason and importance of meditation. Shahrastani's *Kitab al-Milal-wa-n-nihal* (1125 CE) has the longest Buddhist description than any other Muslim source. He compares Buddha with al-Khizr[1]. It describes the several Buddhas before the historical Buddha and the way to attaining *boddhisatvahood*[2] (Elverskog 2010: 60, 66, 71, 88, Ernest 2003).

Yahya *bin* Khalid Barmaki[3] was a physician of Caliph Harun-ur-Rashid and was the patron of physicians and translators of the Buddhist medical works into Arabic and Persian. The *Sanskrit* books on medicines were imported directly from the Indus Valley to Iraq and translated into Arabic (Ditcher-Barnburg 2003: 300; Prioreschi 2004: 110). They sent scholars to Sind to study medicines and pharmacology and invited the

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[1]As al-Khizr is famous for his quest for mystical Enlightenment

[2] Six vows and ten virtues of Buddhism

[3] after *Sanskrit Pramukh*, ie., the high priest

Buddhist monks to Baghdad. Manaka (*Mankhaor Minikya*) was proficient in *Ayurveda* and other Indian sciences. He was appointed as a Chief Physician at the Royal Hospital at Baghdad. He translated several books to Persian and Arabic. Ibn Dhan, the son or descendent of Bhala was heading the hospital of Yahya *bin* Khalid. Sālih was a famous practitioner in Baghdad. Numrous Arab medicines were founded on basis of his translations in 800 CE. The book *Kitab-al- Frishta* included a list of the renowned Buddhist works (Nagamia 2003; Said 2003: 321). Kanka, the author of *Bhela-Saṃhitā,* who was the sixth student of Ātreya, was also probably called to Bughdad at the same period. A *manuscript* was discovered at Ankara as an astrological history of the Caliphs, entitled as *Kitab-Kaṅka al-Hīndī* (Agarwal and Lalit *n.d*). Ali *bin* Rabban al Tabari (c. 850-CE) in his *Firdaus-al-Hikmat* (the Paradise of Wisdom) describes various Indian medicines[1] that were introduced in the Arab World by the Indians in Baghdad. The medieval European medicine was in turn based on translations from Arabic World (Hunter 1903: 64-65).

The Arabian physician Rhazes (882 CE) in treating the properties of ginger and other drugs, quotes an Indian writer Sindexar or Sindicara; identified with Vagbhata II of Sind. He was also known as Caraka or Cara. *Vāgbhata Astanā Hrdaya Samhita* (The Compendium on the Heart of the Eight Branches) was one of the Indian treatises translated by the order of Caliph al-Mansur. Vagbhata II was the son of Simha Gupta, Prince of Physicians, an inhabitant of Sind. His work is based on the summary of Vagbhata the Elder. Five commentaries were written to *Vagbhata II Samhita*. The commentary of Mādhava called as *Rugviniścaya* on pathology was most popular work of the Indian medicines (Kapoor 2003: 252, 495). During 7th *c.* CE many other text books were taken to the Muslim world including those of *Ashṭanga Samgraha* of Vagbhata

Kanka took with him certain Indian books to Baghdad at the time of Caliph al-Mansur (773 CE) including *Brahma Sphuta, Siddhānta of Brahmagupta* and*Khāndā Khadiyaka.* Ibrāhim-al-Fazāli and Yaqut bin Tariq translated Brahmagupta into Arabic as '*Sind Hind Al Kabir*' with help of the Sindhi monks by order of the Caliph. The surviving fragments of the *Sind Hind* indicate that the main source may have had belonged to the Brahma Paksa. The decimal place value numerals and decimal arithmetic system called as *Brahma Sphuta Siddhanta*, were called as 'Indian Calculation' (*Hisab-al Hind*) in Sind

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[1] For instance, *Jauz Hindi (coconut), Tamar Hindi (tamarind), Ud Hindi (aloe wood), Mileh Hindi (Indian salt), Kammun Hindi (Indian cumin), Qust Hindi (Costus indica), Halelaj (Chebulic myrobelan), Balalaj (Belliric myrobalan), Amlaj (Emblic myrobalan), Saddhij Hindi (Mala bathrum indica).*

***Hind al Kabir*. Later on it became a mandatory part of arithmetic of the Islamic World (Plofker 2009: 256; Vassiliades 2000: xi). Al-Khwārzami compiled his *Zij* on the basis of al-Fazāri's *Sind Hind*; al-Khwārzami and al- Fazāri, being the best known astronomers of their time. Ya'qūb *bin* Tāriq and Māsh' Allāh, also translated the Indian astronomical treatises, in Baghdad. Al-Bīrūnī in his Encyclopedia *Tahqiq mā li' l-Hind* (Inquiry into what is to be found in India) gives full information about all astronomical books of India and their Arabic translations. The Part VII, called as *Maqāla* (discourse) IV in the *Firdaws al-Hikme* (Paradise of Wisdom) of Ali *b.* Sahl Rabban al-Tabari, deals in thirty-six chapters with the medicines based on Charaka Samhita, Suśruta Samhita, Nidana and Vagbhata's Ashṭanga HridayaSamhita (Akhmedov 2003: 193; Elverskog 2010: 61; Said 2003: 320).**

The Hindu and Buddhist scholars worked for the *Bait'l Hikmat* of al-Mahdi (rule 775-785 CE) and translated numerous of *Sanskrit* works into the Arabic language. The *Kītab-ul-Bud* (Buddha's previous life stories) was the translation of the Asvaghosa's Jatakamala and uddhacarita. Aban-ul-Lahiki (750-815) wrote down anepic named as *Kitab Belwa wa Budhasaf.* The work was later on passed to legend of *Barlaam and Josephat* of Christian and Jewish World. During al-Mamun reign, *al-Jahiz* published in Baghdad Fakir as *Sudan ala l' Bidan* (The Superiority of Black over White) contained praise of the great cultural achievements of India (Berzin 1996). In his *al-Qānūn al Ma'sūdi* (Canon of Sultan), Al-Bīrūnī divides the Muslim scholars into two groups 1), the adherents of Hellenistic traditions, and 2), the adherents of the Indian traditions. Al-Bīrūnī describes the trigonometric methods to measure with the observations of eclipses and experiments he had made in the fort of Nandana (present day Gujarat in Pakistan) at sometimes between 1020-1025 CE (Akhmedov 2003: 207).

5.2.3 The Gandhāra legacy to Far East

(i) *The Song Period China:* **Jan Yun-Hua (1966: 142) asserts that the Muslim conquerors of India and Central Asia never restricted the Buddhist monks to travel peacefully to the Song China in 10th and 11th *c.* CE. Nonetheless, the interest of the monks in the translation activities considerably decreased in these centuries. The Gandhāra monks took about thirty-nine *sūtras* to Song China (977-1032 CE) a number exceeding the *sūtras* taken from any other part of India. Among forty-seven monks, who travelled to Song China, only four were extensively involved in the translation activities, namely, Dharmabhadra from Madhyadeśa, and Dharmadeva, Dānapāla, and Dharmapala; the later three belonging to Kaśmir and Uḍḍiyāna. The king built the 'Institution for Canonical Translations' when *T'ien-his-Yśai,* a Master of Tripitake from**

Kaśmir, along with Dānapāla reached the Song China. The Buddhist monks from Uḍḍiyāna and Kaśmir were ordered to reside at the monastery (Jan Yun-hua 1966:147; Kumar 2005).

Dānapāla (980 CE) has been considered as the most productive of all the Indian monks to the Song China. He translated one hundred and eleven works into Chinese (Baghchi 1981: 260; Sen 2003: 122).

Dharmapala was a native of Kaśmir, who reached China in 1004 CE. He was highly praised by the Emperor Zhen Zog for extensive propagation of Buddhism in Song China Dharmapala and Wei-ching (1035 CE) wrote down 'A Dictionary of the Indian Words (*T'ien-chu Tzu-yüan*) and presented it to the Institute of Canonical Translations. It was completed during Jing You Period. It was regarded as the first work on Śabdavidya in China (Jan Yun-Hua 1966: 158). Devaśāntika took great pains to sustain and improve the translation projects. Ninty four extant translations are attributed to him. He requested the king to make provisions for 150 novices to learn Sanskrit, as the number of qualified monks may increase in the coming years (Sen 2003: 121). The Kaśmiri teachers Dharmo Haracharya, Prajna, Prajnabala and Pan-jo (8th *c.* CE) are enumerated in the following lines.

Dharmo Haracharya wrote commentaries on two treatises of *Dharmakirti*. Prajna belonged to Kapiśa, but he studied in Kaśmir and Nalanda. Prajnabala reached China during T'ang Period, and translated one work into Chinese. Pan-jo or *Che hui* translated eight works into Chinese. Meghasikha of Uāḍḍiyana translated one work into Chinese in 705 CE in assistance with Pramity from Madhyadeśa and a Chinese monk. Amoghavajra, whose family had migrated from Northwestern Provinces to Ceylon, went to Loyang with his teacher Vajrabodhi in 8th *c.* CE. *T'ien-kio* of Uḍḍiyāna, whose *Sanskrit* name is not known, reached China in 9th *c.* CE and composed Chinese Buddhist Encyclopedia.*T'ien-si-tsaj* entered China in 10th *c.* CE. In 10th *c.* CE one hundred and fifty seven Chinese monks are said to have visited Kaśmir. The Chinese Buddhism declined in 11th *c.* CE, when it was submerged in the magical practices, and failed to inspire the intellectual life of the Chinese (Bagchi 1981: 73, 255, 272; Bakhshi & Lipi 2000: 258; Lahiri 2009; Sen 2002: 27).

(ii) *Tibet:* **Many aspects of the Tibetan Buddhism are closely associated with the Buddhist and the Buddhist personalities in Kaśmir and Northwest Provinces.**

Padmasambhava[1] is regarded as founder of Nyuingma Buddhism in Tibet, Bhutan and Nepal. Some texts also refer him as Ugyen Rinpoche[2]. Padmasambhava, the Esoteric Master from Uḍḍiyāna, on invitation of the Tibetan king *Khri-ssrong Ide-brtsan* took the task of propagating Buddhism in Tibet. His *yogic* and metaphysical teachings formed the basis of *Nyingama* or 'Ancient' order of the Tibetan Buddhism. He is said to have been proficient in fine worldly sciences. His 'Eight Manifestations' remained the favored theme of Nyingama Art of Tibet for centuries (Reichelt 1953; Brown 2007: 28).

Several Kaśmiri teachers contributed to the Tibetan Buddhism. For instance, Dharmakaradatta (755-797 CE) translated the Vinaya Vastu along with Sarvagudeva into Tibetan language. Ananta, Jivamitra, Danasia and Sraddakaravarman also translated a number of texts into Tibetan. Ratnavaja completed his course of studies in Kaśmir and Vikramasila. He also travelled to Uḍḍiyāna. Then he visited Tibet, where he was appointed as Supervisor of the circular terrace of *Bsam-yas* monastery which was burnt in 986 CE. He supervised 500 works which included brick-layers, carpenters, goldsmiths, black smiths, and sculptors. Jnanasribhadra spread the Buddhist logic and Abhisanaya in Tibet. Sarvagnamitra wrote Sragdarastotra in praise of the goddess Tara. The *strota* has variously been translated in Tibetan (Kaw 2001: 91).Tabuta and Ganuta went to Tibet on invitation of King Srong-btsen-sgen (Devahuti 2002: 83). Avanta reached Tibet in 8th *c.* CE. During the reign of King Tesrondevon in the 9th *c.* CE a well known Buddhist scholar, Badamsambo, was invited to the court of Emperor, where he translated the Buddhist doctrine into Tibetan. Dambalodoi was invited as a physician.

Abhisamayālamkara Sūtra reveals the hidden meaning of the Prajna texts. Asanga composed its commentary and Vasubandhu followed Pancavimśatisāhasrika of the Prajna sūtras from Yogācāra point of view. According to the Tibetan chronicles twenty one commentaries of the text were composed by the Indian monks Haribhadra and Ratnākaraśānti. Two commentaries were composed by the Kaśmirian monks Dharmaśri and Abhayākaragupta. The commentary on the three Prajna texts, i.e., Śatasāhasrika, the Pancavimśatisāhasrika and the Astadaśasāhasrika are ascribed to the Kaśmirian monk Damstrāsena (Leningard 1932: 14).

Atiśa, the 11th *c.* CE grand translator in Tibet was a Bengali by birth, but he travelled to Northwestern Provinces as a young man. He studied *śāstras* on the Mentrayāna in

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[1] called as *Guru Rinpoche* in Bhutan

[2]*Uddyana* is known as *Ugyen* in Bhutanese

Kaśmir, and practiced Tantric Buddhism in the Valley of Swat for some years. He took part in *gaṇacakra,* i.e., the Tantric feasts in the form of *dākinis* in the country of Uḍḍiyāna and listened to numerous secret *vajra* songs (Roerish. Bk v. 242). Later these songs were developed into *Vajrayana* tradition. His contributions are considered as a second birth of Buddhism in Tibet after which it emerged as a leading center of Buddhism at a time when the Buddhism in China had almost disappeared (Huntington & Dina 2003: 150; Sen 2002: 62). Atiśa's commentary on Abhisamayālamkara Sūtra, called as Bodhi-patha-pradipa, or 'A Lamp for the Path of Enlightenment' became foundation for Tson-kha-pa's renowned work called as the Lam-rim-chan-mo. The later was taught as a curriculum in the Tibet's first distinct religious order, called as Bka'-gdams-pa, i.e., 'Word Instructed', to which Dalai Lama belonged. The Tibetan monks composed several manuals of the Atisa and Tson-kha-pa's treatises (Leningard 1932: 14; Sherburne 2000: xvi).

The monastery architecture of Tibet is deeply influenced by the Gandhāra monasteries (Pubaiev & Bolosokhoiva 1989). The Jokhang in Lhasa, built in 7th *c.* CE is the earliest monastery revealing the Gandhāra architecture. A Gandhāran stone reliquary from Shekhan Dheri in the form of a model, and some buildings depicted in Gandhāra relief and some full size chapels in Takht-i-Bahi, seem to be the antecedent of the monastery. The Tibetans had also designed *vimanas*[1] for ritual purposes, in 8th *c.* CE, after the reliquary model of Shekhan Dheri. The practice of text burial in Tibet and East Asia was borrowed from Gandhāra (Berkwitz, Julian and Claudia 2009: 31; Denwood 1990: 98).

Williams (2009: 12) mentions the enormous popularity of Karandavyuha Sūtra[2] in Tibet in 19th *c.* CE. The *sūtra* is the earliest textual source for any mention of the most popular mantra, *Om Manipadme Hum*[3] in Tibet. The *sūtra* was a prominent feature of the landscape, carved and painted on rocks, *Mani walls*[4] or on votive stones. It filled the prayer wheels, the small or large drums or cylinders, lining the outside wall of the Buddhist temples, to be spun by the devotees. The earliest version of the *sūtra* reached

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[1] *Sanskrit vimana*, usually translated as "airborne chariot" or "celestial car".

[2] The word *karanda* refers to 'a basket or a container used for keeping relics', thus *Karanda Sūtra* refers to a casket containing a 'magnificent array' of the manifestations and works of Avaloketiśvara.

[3] The six-syllabeled *Sanskrit mantra*, associated with Avalokiteśvara. *Mani* means 'Jewel' or 'Bead' and *Padma* means 'the Lotus Flower'.

[4] The *Mani walls* were constructed entirely out of rocks, each inscribed with the sacred formula in monumental form.

Tibet during the reign of Lhathothori in 5th *c.* CE. The *sūtra* possibly originated in Kaśmir, as its two fragments were found in Gilgit manuscripts. Karandavyuha Sūtra has close affinities with Sukhavati Sūtra, as it relates the *manusmirti*[1] as means of entering the vision of Buddhist *iśvara*, or Avaloketiśvara. However, Karandavyuha Sūtra assimilates many characteristics of the Śaivite and Vaishnavite Purānas. The Tibetan monks kept *Vajra* shaped bell, called as *Dorje*[2], shaped like an imaginary thunderbolt, during rituals (Litvinsky 1989; Williams 2009: 324).

Tibet, Nepal, Bhutan and Burma retained strong monastery education till 19th *c.* CE. In Burma every village had a monastery[3]. Every monastery was a school where the education was carried out by the monks. The sons of the Buddhist families went to the monastery school till twenty years of age. There was a high rate of literacy in Burma due to proliferation of these monastery schools. The literacy was higher in the rural areas, as the monasteries were most commonly found in these areas (Gen'ichiro 1981; Tōrū 1981: 107).

The decline of the Buddhist monastery schools started in 17th *c.* CE due to the introduction of the Western schools. In any case, a number of monastery schools survived till 19th *c.* CE, when a British Survey of 1869 reported 3,438 monastery schools in the Lower Burma only (Tōrū 1981: 108). The indigenous schools rapidly declined under the colonial rule. Nonetheless, the strict reverence to the teachers survived till World War I as a reminiscent to the monastic discipline. After World War I, the education system changed abruptly and the society totally forgot its traditional norms (Shashibala 2002).

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[1]**'The vision of Manu', the earliest and most important part of Dharma śāstra.**

[2]**The Dorje consisted of a short bar, about four inches long, the two extremities of which swell up in a globular form. The original Dorje was supposed to have fallen down direct from Indra's Heaven, and to have been preserved in the monastery of Lhassa, called as Sera.**

[3]***Kyuang* in Burmese language**

CHAPTER 6:

SUMMARY AND CONCLUSIONS

The present study was focussed on the investigation of sources, structure and legacy of Gandhāra monasteries. The sources were drawn with the help of Buddhist scriptures, the architectural remains, paleographic and numismatic evidence, as well as Chinese historic and the pilgrims' travel accounts. The study mainly focused on the Kuśan Era, buttraced sources of Gandhāra education in *Vedic* and *Upaniśadic* teachings.

The University Centre of Taxila referred to segregated schools, run by renowned teachers, who specialised in their own areas of expertise. *Kautilya Arthaśāstra* and Páńini Ashtadiyāyi provide clues to the school life and the courses of study; among which grammar, political education, hydrology, the environmental and the moral education may be of special mention. We noticed that Gandhāra remained a cradle of important innovative and revolutionary movements, especially education, since *Vedic* period. The indepth study of the subject brought forth that some important Pre-Buddhist treatises were possibly originally written in Gandhāra, e.g., the oldest parts of *Upaniśads, Bhagavat Gītā* and *Kautilya Arthaśāstra.*The scriptures were later on rewritten, edited or additions were made during the Gupta period.(See Chapter 2).

The study focussed on the role of Gautama Buddha as a great teacher, the early education of Siddharta (See Pl. 1a & b, 2a), the Buddhist philosophy of education, and his teaching methodologies as manifested by Gandhāra scriptures (see supra 3.1.1, 2, 3). The Chinese and other literary sources were used to highlight the educational role of the ancient Gandhāra educational centres of Taxila, Kaśmir, Peshawar and Swat Valley (3.2.1, 2, 3). It maintained that the major Mahāyana scriptures are ascribed to Nāgarjuna (possibly belonging to Kaśmir), Asanga and Vasubandhu, and Asvaghoṣa of Peshawar. China possesses a complete Buddhist Canon largely taken by monks travelling from Gandhāra to China. The study highlighted that the earliest translations of Buddhist scriptures were largely carried out from Gandhari Prakrit. The Chinese translations from Sanskrit Buddhist scriptures were carried out after the examples set by Huan Tsang in 7th *c.* CE (see supra3.3).The Buddhist scriptures provided clues to the courses of study and structure of education system in Gandhāra monasteries(see supra 4.2.2, 3& 4.3). The travelogues and other scholarly researches of 19th-early 20th *c.* CE were enumerated wherever they supported the main thesis of the present study.

As far the structure of Gandhāra education system is concerned, the Gandhāra monasteries institutionalized it, which was publicly recognized useful and healthy for

cultural and social development. They preserved and made available highly effective rules for communicating ideas, behavior and body regulations, etiquettes, rituals, dress-codes and material objects, e.g., manuscripts, monastery architecture and relief to the people (Collins 2010:7; see Ch. 4).

Gandhara scriptures provide clues not only to the courses of study, but also the use of advanced teaching methodologies, *viz*, mnemonics, riddles, dialogue and debate; leading to critical analysis, reasoning and logic. Meditation focused on balanced development of mind and body. It provided wisdom, knowledge, peace of mind and harmony, leading to a progressive and peaceful society (Michell 2010:26). However, meditation was not only meant for spiritual attainment but also for enhancing the learning abilities of the practitioner. Self-discipline attained through meditation brought purity of thought, stability in attitude, perseverance and concentration in the learning discourses. The study suggested that some of the Gandhāra monasteries may have been built keeping in view the meditation practices, as their inner environment was kept quiet and dark in imitation of a cave (see supra 4.5.2).

The education system in Gandhāra monasteries also imparted moral education through relief and religious lore. The *Jātaka* rich in theme, symbolism, metaphor and riddles contained important messages for the common people. The legend affected social psychology, social laws, customs, belief and conviction. The Gandhāra MS manifest several *avadanas* (the historical *Jātaka)* (Salamon 1999: 36). The Asvaghoṣa Sūtralamkara was based on *Jātaka*, that probably later formed an important basis of the Pali collection of *Jātaka* in Tibet and Nepal (see supra 4.6.4 & Pls. 37, 41a).

The study highlighted that Gandhāra monasteries sponsored and helped in developing art, architecture and crafts. For instance the monasteries of Dharmarājika and *Shah-ji-Dheri*, Mohra Moradu, Takht-i-Bahi, Saidu Sharif, Najigramand Rani Ghat revealed the highest technical and engineering skills in terms of layout, designing, workmanship, decoration, painting, drainage and water procurement system (see supra4.8; Map 4; Figs. 1-3; Pl. 8b, 9a, 10b, 11a & b, 12a & b; Pl. 8, 13a &b 14-15a & b). The presence of thousands of Gandhāra monasteries reveals a substantial financial base to support the educational and religious enterprises of these institutes. The material remains attest to the economic, social and political prosperity of Gandhāra monasteries that remained so far more than one thousand years. Archaeological remains of the monasteries as well as Chinese chronicles mention environmental-friendly architecture. The earth, wood and stone were not only used for their natural significance and ease of construction, but also for their environmental significance. The craftsmen guilds produced self-sufficient and

self governing economy in villages and urban centers. The archaeological and literary evidence suggests highest level of wood working, art and architecture in stone, metal working in silver, gold and bronze, etc, and scribing. The wooden and stone architecture, especially the columns bases and capitals, and arches of south India had their precedent in Gandhāra reliefs (See Pls. 42a & b). Such architectural elements were in vogue in Swat, Peshawar and Taxila till present times. The old traditions of making reliquaries have found way in grave stones and domestic decorative objects. The Gandhāra techniques of metal engraving and stone inscriptions were widely used till early parts of 20th *c.* CE; presently found their new impetus in the decoration of the grave stones. The jewelry techniques, although much dilapidated after invention of machine-made jewelry; still followed to some extant in Taxila Jewelry market.The *Jātaka* and scriptures reveal that merchant guilds and craftsmen played important socio-economic role in Gandhāra. The farmers, spinners, weavers, carpenters, goldsmiths, potters, black smiths and the oil pressersnot only produced for villages, but, also, contributed to the urban and social economic prosperity (see supra 4.8; Pls. 25b, 34b, 35-39, & 40a).

The Gandhāra monastic establishements collapsed with their academic impotency that set in gradual decline of Gandhāra civilization. The study critically analyzed the disintegration of Gandhāra monasteries with regard to Hūn and Muslim invasions, and concluded that not only the invasions, but also the compound effects of the external factors, e.g., environmental and social, inherent structural weaknesses and some elements in doctrine initiated decay in the Gandhāra monasteries. It also brought forth that the Muslim rulers invited the Buddhist teachers in their Caliphate and translated their scriptures in Arabic. Several important Buddhist treatises described under the generic term 'India' were taken from Sind to the Arab World in 8th-10 centuries CE. The Gandhāra educational enterprises spread to Europe through the Arabic translations. The Buddhism persisted in Muslim occupied areas of ancient Greater Gandhāra and lower Indus Valley till 11th *c.* CE, after which it gradually absorbed in the dominant religious strands of Hinduism and Islam (see supra 5.1).

The study highlighted the influence of Gandhāra education system on culture and education of whole Asia; some were still followed in Indian Subcontinent and Far Eastern countries for several centuries after disintegration and demise of Gandhāra Buddhism. Both Hindu and Muslim religious/educational institutes owe much to educational and moral doctrines of Buddhism.The Muslim *madrassahs* (schools) in Sind, Swat and Central Asia manifest significant architectural and procedural similiarities

with Buddhism. A number of important intellectual movements initiated in the northwestern provinces travelled across to the Ganga Basin in the northeast. It also pointed out the legacyof Gandhāra education in other parts of Asia, i.e., China, Tibet and some other countries of the Far East (see supra 5.2).

Contrary to the ancient, modern education system largely focuses on accumulating data and amassing facts in a machanical manner. We need to introduce a rigorous research culture starting at the Primary school and developing through Secondary and Tertiary levels of education. We also need to re-consider our ideals of personal discipline, personality development and moral/ethical behaviour.The modern education system also largely neglects the moral, ethical and the spiritual aspects of education. A lack of holistic approach in the education system has caused self-centered approach and degraded spirituality, leading to unsatisfied youth and unbalanced society. Consequently, there arises apathy, restlessness and finally the violence towards other human beings as well as the non-humans and the environment.

We need to design an education system that promotes love and respect for all life and the environment. The education system must provide an insight into the importance of human interaction with his/her environment (Dewey 1938, 1916). We need a paradigm change in the philosophy and practice of education at all levels of our modern education system, i.e., home education; as well as the primary, secondary and higher education. According to Angha (as cited in Michell 2010: 33)*"we need to bring 'the soul' back to our education system".* The sincere leadership at all levels of the social system and the dedicated workers may lead to an effective formal and informal education system, taking care of education at home, school and the society level.

Recommendations

1. We have noticed that the roots of the Gandhāra Buddhism were firmly lying in *Vedic* Period. However, the Pakistani Universities do not offer courses on *Vedic* and *Upaniśad* developments that took place in ancient Greater Gandhara. Therefore, contributions in the evolution and development of several intellectual, innovatory and philosophical movements are poorly understood by research students. Foreign universities teach the *Vedic* and *Upanišadic* philosophy, history and archaeology that can easily be adapted and modified according to our need, in pour humble opinion.

2. The courses on Gandhāra Archaeology may include portions on Buddhism in China, as the Chinese chronicles provide detailed information on development of Hinayana and Māhayāna Buddhism in Gandhāra, Central Asia and China in the first few centuries of the Christian era. The courses of study on Silk Road Buddhism and transfer of Buddhism to Tibet, Nepal, Śri Lanka will also highlight the contributions of the Gandhāra teachers.

Bibligraphic References

Abdul Samad (2009) Buddhist Reliquaries from Gandhāra. In *Gandhāra: The Buddhist Heritage of Pakistan: Legends, Monasteries, and Paradise.* pp. 191-192.Organisation der Vereinten Nationen fur Bildung, Wissenschft und Kultur. An Exhibition Under the Auspices of UNESCO

Abeysekera, R. (2002) *Practicing the Dhamma: with a view to Nibbana*. Taiwan: The Corporate Body of the Buddha Educational Foundation.

Ackermann, H.C. (1975) *Narrative Stone Reliefs from Gandhāra in the Victoria and Albert Museum in London.* Rome: IsMEO.

Agarwal, V. S. (1953) *India as Known to Páńini*. Lucknow: University of Lucknow.

Agarwal, D. P.& Lalit, T. (*n.d*) *Ayurveda: The Traditional Indian Medicine System and its Global Dissemination*. http://www.infinity foundation.com.ret. On 25.10.2010

Agrawala, R.C. (1995) Skanda-Sasthi in Gandhāran Relief: A Review. *East and West*, 45 (1-4), 329-332.

Ahmad, M. (1969) *Indo-Arab Relations: An Account of the India's Relations with the Arab World from Ancient to Modern Times.* USA: The University of Michigan.

Akhmedov, V. (2003) Astronomy, Astrology, Observatories, and Calenders.In *History of Civilizations of Central Asia*.ed. by C.E.Bosworth & M.S.Asimov. pp. 195-221.Vol. IV.Part Two. New Dheli: Motilal Banarsidass Publications Private limited.

Albinia, A. (2008) *Empires of the Indus: The Story of River*. UK: John Murray Publications

Allchin , B. (1984) ed. The Buddhist Ritual in the Literature of Early Islamic Iran. *South Asian Archaeology*. London: Cambridge University Press

Alqazi, R. (2002) The Evolution of Indian Costume as a Result of the links Between Central Asia and India in Ancient and Medieval Times. In *History of Science, Philosophy and Culture in Indian Civilization*.Ed. by Chattopadhyaya.pp. 464-484. Vol III. Part 2. London: Oxford University Press.

Altekar, A. S. (2002) ***State and Government in Ancient India*****. New Dheli: Motilal Banarsidass Publications Pvt ltd.**

Anālayo (2006) Fa-Xian and Chinese Agamas.In ***India on the Silk Road.*** **Ed. by Sheel, K. Lalji, S. & and Charles, W. pp. 57-94. Dehli: Buddhist World Press.**

Apffel-Marglin, F. & Pramod, P. (2000) Sacred Grooves and Ecology: Ritual and Science. In ***Hinduism and Ecology: The Intersection of Earth, Sky and Water*****.pp. 291-316. Massachusetts: Harvard University Press.**

Aryan, S. (2002) Bamiyan in an Art Historical Perspective. In ***Bamiyan: Challenge to the World Heritage*****. Ed. by Warikoo, K. pp. 11-32.New Dheli: Bhavana Books and Prints.**

Astley, J. & Leslie, J. Francis (1994).Ed. ***Critical Perspectives on Christian Education*****. Herefordshire: Gracewing Fowler Wright Books.**

Aśvaghoṣa & Edward Hamilton, J. (1936) ***The Buddhacarita or Acts of the Buddha: Sansikrit Text*****. Tr. by E.H. Johnston.New Dheli: Motilal Banarsidass Publishers PVT. Ltd.First Published in Lahore:. 2004**

Ashraf, Khan, M. & Mahmood-ul-Hassan (2009) A New Discovery in the Taxila Valley: Archaeological Excavations at the Buddhist Monastery of Jinan Wali Dheri. In ***Gandhāra: The Buddhist Heritage of Pakistan: Legends, Monasteries and Paradise*****. pp. 302-307. Organisation der Vereinten Nationen fur Bildung, Wissenschft und Kultur. An Exhibition Under the Auspices of UNESCO**

— (2004) Discovery of Mural Paintings from Jinna Wali Dheri, Taxila Valley.***Journal of Asian Civilizations*****, 1, 14-27.**

Auboyer, J (1961) ***Daily Life in Ancient India from 200 BC to 700 AD*****. London: Lowe and Brydone Ltd**

Bagchi, P.C. (2008) ***Volumes of my Le Canon Bouddiqueen China*****.http://library.du.ac.in/dspace/bitstream.ret. on 2.4.10**

—(1981) ***India and China: A Thousand Years of Cultural Relations*****. Calcutta: Sarawat Library**

Bakhshi, S. R. & Lipi, M. (2000) ***Encyclopedic History of Indian Culture and Religion*****. Education in India.2.Deep & Deep.**

Ball, W. (1989) The Buddhists of Sind. ***South Asian Studies*****, 119-131.**

— (1988) The Seven Qandahārs: The name Q.ND.HAR in the Islamic Sources. ***South Asian Studies*****, 4, 116-141.**

Barua, P.R. (2000) Gods and the Brahma-Viharas.***Journal of the Asiatic Society of Pakistan*****, XII (2), 177-284.**

—(1967) Gods and the Brahma-Viharas.***Journal of the Asiatic Society of Pakistan*****, XII (2), 177-248.**

Basham, A. L. (2005) Aśoke and Buddhism: A Re-examination. In ***Buddhism: Critical Concepts in Religious Studies*****. Vol. 1.pp. 54-63. London: Routledge.**

Beal, S. (1884) ***SI-YU-KI Buddhist Records of the Western Worlds: Translated from the Chinese of Hiuen Tsang*****. Dehli: Munshiram Manoharlal Publishers Private Limited**

—(1878) ***Texts from the Buddhist Canon Dhammapada.*****London: Routledge**

—(*n.d.*a)Some Remarks on the Narrative of Fa-Hien.***The Journal of the Royal Asiatic Society of Great Britain and Ireland*****.New Series, 19 (2).http://www.jstor.org/stable. Ret. on 15.3.10**

—(*n.d.*b)***Travels of Fa-Hien and Songyun Buddhist Pilgrims from China to India (400 AD to 518 AD).*****Microfische.Peking University Library. Beijing.**

Beér, R. (2004) ***The Encyclopedia of Tibetan Symbols and Motifs*****. Chicago: Serindia Publications Inc.**

Behera, S. (2002) India's Encounter with the Silk Road. ***Economic and Political Weekly*****, 37 (51), 5077-5080.http://www.jstor.org/stable. ret. on 25.4.10**

Behrenedt, K. A. (2007) ***The Art of Gandhāra in the Metropolitan Museum of Art.*** **London: Yale University Press.**

—(2003) ***The Buddhist Architecture of Gandhāra.*****Part 2.Vol. 17. The Netherlands: Konihklijke Brill. NH. Leide.**

Bell, A.P. (2000) ***Didactic Narration: Jataka Iconography in Dunhaung with a Catalogue of Jataka Representations in China*****. The Institute for East Asian Art History. Heidelberg: Neidelberg University.**

Benenitsky, A. (1968) ***Archaeologia Mundi: Central Asia*****. Geneva: Nageel Publishers. (tr. from Russian by James Hogarth)**

Berkwitz, S.C., Julian Schober and Claudia Brown, ed. (2009) ***Buddhist Manuscript Culture: Knowledge, Ritual and Art*****. USA. NY: Routledge. 270 Madison Avenue.**

Berzin, A. (1996) ***The Historical Interaction between the Buddhist and Islamic Cultures Before the Mongol Empire.*** **http://www.berzinarchives.com/web/en/archives/e-book.ret. on 22.10.2010**

Bhāndārkar, R.G. (1984) Acharya, A Friend of the Student, and the Relation Between Three Acharyas. ***The Indian Antiquity: 1872-1933,*** **V, 345-350. 1876**

Bhardwaj, H.C. (1979) ***Aspects of Ancient Indian Technology.*****New Dheli: Motilal Banarsidass Pvt. Ltd.**

Binar, A.D.H. & M.C. Bridge (1989) Tree Rings for Kaniśka. ***South Asian Studies*****, 5, 149-156.**

Biswas, A. (1973) ***The Political History of the Hūns in India*****. New Dheli: Munshiram Manoharlal Publishers Pvt. Ltd.**

Bocking, B. (1995) ***Nāgārjuna in China: A Translation of the Middle Treatise*****. Vol. 18. UK: The Edwin Mellan Press Ltd.**

Bopreachi, O. Chk spl (1997/8) The Maritime Silk Roads: Trade Relations Between Central Asia and Śri Lanka from the Evidence of Recent Excavations. In ***Silk Road Art and Architecture*****. 5. pp. 269-295. Kamakura: Journal of the Institution of Silk Road Studies.**

Bopearachci, O. & Aman-ur-Rehman (1995) ***Pre-Kuśana Coins in Pakistan*****. Karachi: Iftikhar Rasul. IRM Associates.**

Brancaccio, P. (Dec. 1991) The Buddha and the Naked Ascetics in Gandhāra Art: A New Interpretation. ***East & West,*** **41 (1-4), 121-131.**

Britannica-Macropaedia (1994) ***Knowledge in Depth. 18.*** **Chicago: USA.**

Brown, L. (2007) ***Narratives of Faith: Buddhism and Colonial Archaeology in Monsoon Asia*****. Bradley Mayhew, Stan Armington Bhutan.**

Brunsma, D.L. (2004) ***The School Uniform Movement and What it Tells about American Education: A Symbolic Crusade.*** **USA: Scarce crow Elder.**

Bucur, V. (2006) ***Acoustics of Wood: Springer Series in Wood Science.*** **Hiedelberg: Springer Berlin**

Buhler, G. (1898) ***On the Origin of the Indian Brāhma Script*****. Trübner**

Bulliet, R.W. (1976) Naw Bahār and the Survival of Iranian Buddhism. ***Iran*****, 14, 140-145.**

Burns, D. M. (1994) ***Buddhist Meditation and Depth Psychology*****.Buddha Dharma Education Association.http://www.buddhanet/pelf. ret. on 5.11.10**

Burley, M. (2007) ***Classical Sāṃkhya and Yoge: An Indian Metaphysics of Experience.*** **Routledge: Taylor and Francis Group.**

Call, B. & Indira Mahalingam (ed) (1997) ***Companion Encyclopedia of Asian Philosophy*****. London: Routledge.**

Callieri, P. (2009) The Archaeological Basis. In ***The Buddhist Heritage of Pakistan: Legends, Monasteries and Paradise.*****pp. 58-63. Organisation der Vereinten Nationen fur Bildung, Wissenschft und Kultur. An Exhibition Under the Auspices of UNESCO.**

—(1989) ***Saidu Sharif I*****: The Buddhist Sacred Area. The Monastery.IsMEO. Rome**

Carvalho, D. N. (2007) ***Forty Centuries of Ink*****. Middlesex: The Echo Library.**

Chakladar, H.C. (1987) ***Social Life in Ancient India: A Study in the Vatsyayana's Kamasutra*****. Faisalabad: Tariq Publications.**

Chandra, L. (1988) ***The Thousand-Armed Avalokiteśvara*****. New Dheli: ICNCA/Abhinav Publications.**

Chandra, R. G. (1979) ***Indo-Greek Jewellry*****. New Dheli: Abhinav Publications.**

Charnyuler, B. N. (2007) Vedic Knowledge: Contribution to maintain Ecological Balance and Environmental Protection. In *Science, History, Philosophy and Literature in Sansikrit Classics*.Ed. by Micheal, K.B.A. pp. 3-13. Dehli: Sundeep Prakashan.

Chattopadhyaya, D. P. gen. ed. (2007) *History of Science, Philosophy and Culture in Indian Civilization.* Vol XV. Part 1. PHISPC

—(1977) *Science and Society in Ancient India.* The Netherlands: B. R. Grinner B. V. P.O. Box 70020.

Chattopadhaya, B. Dr. (1979) *The Age of the Kuśana-A Numismatic Study.* Calcutta: Punthi Pustak.

Chaturvedi, S. (1985) *Foreign Influx and Interaction with Indian Culture (6^{th} c. BC-1^{st} c. AD)*. Dehli: Agam Kala Prakashan.

Chaudhuri, S.K. (2008) *Lives of Early Buddhist Monks: The Oldest Extent Biographies of Indian and Central Asian Monks.*New Dheli: Abha Prakshan

Chaudhuri, M. (1983) The Techniques of Glass Making in India (1400-1800 AD).*Indian Journal of History of Science*. 18 (2), 206-219.

Ch'en, K. (1973) *Buddhism in China: A Historical Survey.*Princeton University Press

—(1957) Transformations in Buddhism in Tibet.*Philosophy East and West,* 7 (34), 117-125.

Ching, L. Y. (*n.d.*) *The Sūrangama Sūtra*. Śri Lanka: Brighthill Buddhist Centre.

Cohen, R.S. (Spring 1995) Disconnected Categories: Hīnayāna and Māhāyāna in Indian Buddhist History. *Journal of the American Academy of Religions,* 63 (1), 1-25

Collins, S. (2010) *Nirvana: Concpet, Imagery, Narrative*. UK: Cambridge University Press

Collinson, D. Kathrynplant & Robert, W. (2000) *Fifty Eastern Thinkers*. London: Routledge

Cochrane, S. (2009) Asian Centers of Learning and Witness Before 1000 CE: Insights for Today. *Transformation: An International Journal of Holistic Mission Studies*, 26, 30. http://trn.sagepub.com.ret. on 26.3.10

Conze, E. (*n.d.*) *Buddhism: Its Essence and Development*. NY: Philosophical Library.

Coulter, H. D. (2007) Anatomy of Hatha Yoge: A Manual for Teachers and Practitioners. New Dheli: Motilal Banarsidass Pub. 2006. 2004.

Cowell, E. B. (2002) *The Jātaka: or Stories of the Buddha's Former Births*. Vol. I-III New Dheli: Munshiram Manoharlal Publications Pvt. Ltd.

Cunningham, A. (1963) *Coins of Ancient India from the Earliest Times Down to the Seventh C.*. A. Varani: Indologocal Book House.

___(1871) *The Ancient Geography of India: The Buddhist Period, including the Campaigns of Alexander, and the Travels of Hwen Thseng*. Cambridge. N.Y. Cambridge University Press

(1854) *The Bhilsa Topes or Buddhist Monuments at Central India: Comprising a Brief Historical Sketch of the Rise, Progress and Decline of Buddhism; With an Account of the Opening and Examination of the Various Groups of Topes around Bhilsa.*New Dheli

Dahlaquist, A. (1996) *Magesthenes and Indian Religion: A Study in Motives and Types.* Motilal Banasidass

Dames, M.L. & T.A. Joyce (1913) Note on the Gandhāra Relief Representing the Story of the King Śivi.*Man*, 13, 17-19.

Dani, A. H. & P. Bernard (1999) Alexander and his Successors in Central Asia.In *History of Civilizations of Central Asia.* pp. 67-97. Vol. II. New Dheli: Motilal Banarsidass Pub. Pvt. ltd.

Dani, A. H. (1997) *Indian Palaeography*. New Dheli: Munshiram Manoharlal Publishers Private Limited. 1986.

—(1995) *Peshawar: Historic City of the Frontier*. Lahore: Sang-e-Meel Publications.

Dar. S. R. (2007) Seeking the Eastern Cultural Boundary of Gandhāran Art: Some Fresh Evidence from the Banks of the River Jhelum and the Chaj Doab in the Punjab. ***Gandhāran Studies*****. I, 45-59.**

—(1999/2000) The Sikri Sculptures: Prolegomena on an Exceptional, but unstudied, collection of Gandhāran Art in the Lahore Museum. ***Silk Road Art and Archaeology,6,*** **19-43.**

—(1998)***Taxila and the Western World*****. Lahore: Al-Waqar Publisher. 1984**

—(1970-71).Excavations at Manikyala.***Pakistan Archaeology*****, 7, 6-22.**

Das, A. C. (1980) ***Ṛgvedaedic India: Cultural History of India as Depicted in the Ṛgveda*****. Vol. II. New Dheli: Cosmo Publications. 1920; 1927.**

Das, S. (1980) ***Socio Economic Life of Northern India*****. Abhinav Publications.**

Dasgupta, S. (1922) ***A History of Indian Philosophy*****. Vol.1.New Dheli: Motilal Banarsidass Pvt. Ltd.**

Datta, A. (2005) ***The Encyclopedia of Indian Literature (Volume Two) (Devraj to Jyoti)*****. New Dheli: Sahitya Academy. 1988, 1995, 1996, 2001.**

—(2001) ***The Encyclopedia of Indian Literature (Volume One) (A to Dev)*****. Indic Literature.**

Datta, C.K. (2009) The Philosophical Position of Dignāga and Śankara. In ***Gems of Buddhism.*****Ed by Satyapala, B. pp. 23-28. New Dheli: MD Publications Private Ltd.**

Denwood, P. (1990) Uses of Indian Technical Literature in Tibetan Architecture.***South Asian Studies*****, 6, 95-104.**

Derret, J. P. M. (2006) Versality, Angels and Space: The Meaning of Buddhist and Non-Buddhist Parallels. ***Journal of the Royal Asiatic Society*****, 16 (3), 231-242.**

Deshpande, V. (2001) Ancient Indian Medicine and its Spread to China.***Economic and Political Weekly.*** **36 (13), 1078-1081.**

Devahuti, D. (2002) Ancient Central Asia and India.In *History, Science, Philosophy and Culture in Indian Civilization*.Ed. by Chattopadhyaya, D. P. Vol. III.Part 2.pp. 45-126. London: Oxford University Press.

Dewey, J.(1938) *Experience and Education*. New York: Collier Books

—(1916) *Democracy and Education: An Introduction to the Philosophy of Education.* NewYork: Dover Publications, Inc. Mineola

Ditcher-Bernburg, L. (2003) Medicine, Pharmacology and Veterinary Sciences in Islamic Eastern Iran and Central Asia.In *History of Civilizations of Central Asia.*ed.by C. E. Bosworth & M. S. Asimov. Vol. IV. Part Two. pp. 299-317. New Dheli: Motilal Banarsidass Publishers Private Ltd.

Duiker, J., Jackson, J., &Spielvogel (2008) *The Essential World History*. 3rd ed. USA: Thomson Wadsworth. The Thomson Corporation.

Durant, W. (1954) *The Study of Civilization. Part I. Our Oriental Heritage.* NY: Simon and Schuster

Dutt, N. (1998) *Buddhist Sects in India.*New Dheli: Motilal Banarsidass Publishers Pvt. Ltd

—(1984a) *Gilgit Manuscripts.* Vol. II. India: Sri Satguru Publications. 1941.

—(1984b) *Gilgit Manuscript*. Vol. III. Part 1 India: Sri Satguru Publications. 1947.

—(1980) *Early History of Spread of Buddhism and the Buddhist Schools.*New Dheli: Rajesh Publications.

Dutt, S. (1962) *Buddhist Monks and Monasteries of India: Their History and Their Contribution to Indian Culture.*New Dheli: Motilal Banarsidass Publication Pvt. Ltd.

Easwaren, E.,&Micheal, N. Neglar (2007) Introduced &tr. *The Upanishads.* Canada: The Blue Mountain Center of Meditation.

Eggermont, P. H. L. (1993) Alexander's Campaign in Southern Punjab. Peeters.

Eliades, M., Willard, R. T., & David, G. W. (2009) *Yoge: Immortality and Freedom.*Princeton University Press. 1958, 1969

Elisseeff, V. (2000) ***The Silk Roads: Highways of Culture and Commerce*****. Berghan Books. UNESCO**

Elverskog, J. (2010) ***Buddhism and Islam on Silk Road.*** **Philadelphia: University of Pennsylvania Press.**

Encyclopedia of Britannica: Or, A Dictionary of Arts and Miscellaneous Literature**. (1823) Vol XI. Edinburgh: Archibald Constable and Co.**

Epstein, R. B. (2003) ***Buddhism A To Z*****. Burlingame: Buddhist Texts Translation Society.**

Erdemir, A.D. (oct. 2003) The Application of Ayurvedic Therapies in Turkey and the Importance of Ginger Use from Point of View of Ayurvedic Principles. ***Journal of International Society of Islamic Medicine*****, 2 (4), 24-35.**

Ernest, C. W. (2003) The Islamization of Yoge in the Amrtakunda Translations. ***Journal of the Royal Asiatic Society*****, 199-126.**

Faccena, D. (1999/2000) The Turban in the Figural Frieze from the Main Stupa of the Buddhist Sacred Area of Saidu Sharif I (Swat, Pakistan) and the Corpus of Gandhāra Sculpture. ***Silk Road Art and Archaeology*****, 6, 45-49**

—(1995) ***Saidu Sharif I (Swat, Pakistan) 2*****: The Buddhist Sacred Area. The Stupa Terrace. Rome: IsMEO.**

Faccena, D., Ahmad Nabi Khan and Ihsan Nadiem (1993) ***Pānṛ I (Swat, Pakistan)*****. I. Rome: IsMEO.**

Faccena, D. & Giorgio Gultini (1962) ***Reports on the Campaigns (1956-1958) in Swat (Pakistan)*****. IsMEO.**

Falk, H. (2009) Gandhāran Eras. In ***Gandhāra: The Buddhist Heritage of Pakistan; Legends, Monasteries and Paradise*****. pp. 20-26. Organisation der Vereinten Nationen fur Bildung, Wissenschft und Kultur. An Exhibition Under the Auspices of UNESCO Silk Road Expedition.**

—(2003) Five New Kharoshṭhī Donation Records From Gandhāra. In ***Silk Road Studies*****.pp. 71-86. Silk Road Art and Archaeology 9.**

—(1991) Silver, Lead & Zinc in Early Indian Literature.***South Asian Studies*****, 7, 111-117.**

Fausboll, V. ed. (1877-97) ***The Jātaka.*** **London: Tribner & Co.**

Fatone, V. (1981) ***The Philosophy of Nāgārjuna*****. Dehli: Motilal Banarsidass. 1962**

Feuerstein, G. (1996) ***The Philosophy of Classical Yoga*****. Inner Traditions Bear and Co.**

Filligenzi, A. (2005) Gesture and Things: The Buddha's Rose in Gandhāran Art. ***East and West,*** **55 (1-4), 103-116.**

Fischer, M. P. & I. B. Taurrus (1997) ***Living Religions: An Encyclopedia of the World's Faith.*** **I. B. Taurus and Co. Ltd.**

Fitzgerald, J. L. (2007) Mahābharata. In ***The Hindu World.*****Ed. by Sushil, M. & Gene, T.pp. 52-74.New York: Routledge Taylor and Francis Group.**

Frédéric, L (*n.d.*) ***Buddhism: Flammarion Iconographic Guides*****. Paris: Flammar on.**

Friedrich & Max Muller (1896) ***A Record of the Buddhist Religion as Practiced in India and the Malay*****. Bibliolife LLC.**

Foltz, R.C. (1999) Religions of the Silk Road: Overland Trade and Cultural Exchange from Antiquity to the 15th *C.*. New York: Saint Martin's Press.

Foret, P. & Andrees, K. (2008) ***The Journey of Maps on the Silk Route*****. Leiden: BRILL.**

Foucher, A. (1915) ***Notes on the Ancient Geography of Gandhāra*****. Tr.By H. Hargreaves. Superintendent Government Printing. India**

Galt, H. S. (1951) ***History of Chinese Educational Institutions*****. Vol. 1. London: Arthur Probsthian.**

Ganguly, S. Xuan Zang, Vasubandhu, & Dharmapala (1992) ***Treatise in 30 Verses on Mere-Consciousness*****.New Dheli: Motilal Banarsidas Pvt. Ltd.**

Garg, G.R. (1992) Gen. ed. ***Encyclopedia of the Hindu World.*****Vol. 3. New Dheli: Aśoke Kumar Mittal Concept Publishing Co.**

Garrett, M.M. (May 1997) Chinese Buddhist Religions Disputation.*Argumentation*, 11(2), 195-209.

Gautam, N. (2009) ***Buddhism A Faith of World*****.Mahaveer & Sons.**

Gefrosky, S. (Nov. 1999) Genre Analysis as a Way of Understanding Pedagogy in Mathematics Education.*For the Learning of Mathematics*. 19 (3), 36-46. Retrieved on 8.4.10.http://www.jstor.org.

Gen'ichiro, F. (1981) Tradition and Modernization of Primary Education in Selected Asian Countries. *East Asian Cultural Studies,* XX (1-4), 1-20.

—(2005) *The Structure of Ancient Indian Society: Theory and Reality of the Varna System.*Tokyo: The Tokyo Bunko

Ghosh, A. (1990) *Encyclopedia of Indian Archaeology.* New Dheli: Indian Council of Historical Press.

Giri (1927-1931) *Taxila Museum Records*. Pictographic

Glasśe, C. & Houston Smith (2002) *The New Encyclopedia of Islam: Revised Edition of the Concise Encyclopedia of Islam, 1989, 1991, 1999, 2001.* Stacey International & Cyril Glasśe

Goryacheva, V. (2002) Buddhist Heritage of Central Asia: Problems of Study and Conservation. In *Bamiyan: Challenge to the World Heritage*. Ed. by Warikoo, K. pp. 40-56.New Dheli: Bhavana Books and prints.

Gour, H. S. (1929) *The Spirit of Buddhism*. London: Luzac & Co.

Gregory, P.N. (1986) *Traditions of Meditation in Chinese Buddhism.*USA: Kuroda Institute.

Griffiths, P. J. (1994) *On Being Buddha: The Classical Doctrines of Buddhahood. Suny Series, Toward a Comparative Philosophy of Religions.* N.Y: Suny Press, Albany.

Grimm, D, T. (2000) tr. *Tibetan Healing Handbook: A Practical Manual for Diagnosing, Treating and Healing with Natural Tibetan Medicine*. Lotus Press.

Gupta, L. (2002) Ambaran A Gandhāran Outpost on Shivalik. In *Bamiyan: Challenge to the World Heritage*. Ed. by Warikoo, K. pp. 89-94.New Dheli: Bhavana Books and prints.

Haidav, Ts. (2003) Tibetan and Mongolian Pharmacology.In *History of Civilizations of Central Asia* .Ed. by C. E. Bosworth & M. S. Asimov.pp. 243-248. Vol. IV. Part Two. New Dheli: Motilal Banarsidas Publishers Pvt. Ltd.

Hamilton, S. (2000) ***Early Buddhism: A New Approach: The I of the Beholder.*** **Great Britain: T. J. International, Padstow, Cornwell.**

Hamilton, C.H. (1950) The Idea of Compassion in Mahāyāna Buddhism. ***Journal of the American Oriental Society,*** **70 (3), 145-151.**

Hānda, O. C. (2002) Religio-Cultural Links of Afghanistan and West Himalay. In ***Bamiyan: Challenge to the World Heritage*****. Ed. by Warikoo, K. pp. 57-74.New Dheli: Bhavana Books and prints.**

—(2001) ***Temple Architecture of the Western Himalaya: Wooden Temples*****. M.L. odwani Indus Publishing Co.**

Harikawa, A & Paul Groner (tr. &ed.) (1993) ***A History of Indian Buddhism: From Śākyamuni to Early Māhayāna.*****New Dheli: Motilal Banarsidass.**

Hargreaves, H. (1914a) Excavation at Shah Ji Ki Dheri. ***ASI-Annual Report 1910-11,*** **26-32.**

—(1914b) Excavation at Takht-i-Bahi.***ASI- 1910-11,*** **34-39.**

Hasan Abidi, W (1990) ***Indian and Central Asian Science and Technology in Medieval Times.*****National Science Academy.**

Hastings, J. & John, A. Selbie (*n.d*) ***Encyclopedia of Religion & Ethics*****.Part 14.http://bks.google.com.pk. Ret. On 15/04/10**

Havell, E. B. (2004) ***Encyclopedia of Architecture in Indian Subcontinent*****. New Dheli: Aryans Books International**

Herbert, C. T. (1893) ***A Guide to the Old Persian Inscriptions*****. New York, Cincinnati Am. Bk. Co.**

Hien, V. (ed) (1999) ***The Seeker's Glossary of Buddhism.*** **New York: Rye Brook.**

Hiltebeital, A. (2006) Aśvaghoṣa's Buddhacarita: The First known Close and Critical Reading of the Brāhmanical Sansikrit Epic. ***Journal of Indian Philosophy,*** **34, 229-286.**

___(1999) Rethinking India's Oral and Classical Epics: Draupadi Among Rajputs, Muslims and Dalits. Univesity of Chicago Press.

Hirakawa, A. & Paul Groner (tr. &ed) (1993) ***A History of Indian Buddhism: From Śākyamuni to Early Māhayāna.*****New Dheli: Motilal Banarsidass**

Houtsma, M.T. (1913-1938) ***E.J. Brill's First Encyclopedia of Islam 1913-1936.*****Vol. 1. E.J. Brill & Luzac Co.**

Hunter, W. W. (1986) ***Comprehensive History of Indian Empire: Aśoke-Maurya*****. India: Anmol Publications.**

—(1903) ***A Brief History of the Indian People*****. Oxford: The Clarendon Press.**

Huntington, S. L. (1985) ***The Art of Ancient India: Buddhist, Hindu, Jain*****. New York: Weather Hill, Inc.**

Huntington, J. C & Dina Bangdel (2003) ***The Circles of Bliss: Buddhist Meditational Art*****. Los Angeles County Museum of Art.**

Iknoian, T. (1995) ***Walking Fitness*****. Human Kinetics Publishers Inc.**

Ingholt, H. (1957) ***Gandhāran Art in Pakistan*****. New York: Pantheon Books Inc.**

— (1980) ***Butkara I (Swat, Pakistan) 1956-1962*****: Part 2. Rome: IsMEO.**

Jain, S. K, Pushpandra, K. and Vijey Singh (2007) ***Hydrology and Water Resources of India*****. The Netherlands: Springer, P.O.Box 17, 3300 A Dordrecht**

Jaini (2001) ***Collected Paper on Buddhist Studies*****. New Dheli: Motilal Banarsidass Publishers Pvt. Ltd.**

Jansen, M. (2009) The Cultural Geography of Gandhāra. In ***Gandhāra:The Buddhist Heritage of Pakistan, Legends, Monasteries and Paradise.*****pp. 27-37. Organisation der Vereinten Nationen fur Bildung, Wissenschft und Kultur. An Exhibition Under the Auspices of UNESCO.**

Jan-Yun-hua (1966) India and Sung China. Part II. ***History of Religions*****, 6 (2), 135-168. http://www.jstor.org/stable.com. Ret. on 2.4.2010**

Jettmar, K. (1990) The Gilgit Manuscripts and the Political History of Gilgit. ***Pakistan Archaeology*****. 25, 305-314.**

Jha, M., India & Nepal (*n.d.*) ***Sacred Centers and Anthropological Researches*****. M.D. Publications Pvt. Ltd.**

Jinananada, B (2009) Relation between Reason and Authority. In *Gems of Buddhism*.Ed. by Satyapala, B. pp. 1-5. New Dheli: MD Publications Private Limited.

Johnston, M. (2009) *The Centuries Old Dialogue Between Buddhism and Christianity*.Actatheogica.http://www.ufs.ac.za/faculties.documents.journal.ret. on 1.6.10

Johnston, W. M. (2000) *Encyclopedia of Monasticism*. Vol. 1. Chi-cago: Fitzroy Dearborn Publishers.

Jones, J. J. (tr) (1949) *The Mahāvastu*. Vol. I: Sacred Books of Buddhists. Vol. XVI. London: Lucaz & Co. Ltd.

Joseph (1986) *Uniform and Non-Uniform Communication through Clothing*. West Port CT: Greenwood Press.

Joshi, L.M. (1967) *Studies in the Buddhistic Culture of India During the 7th and 8th c. AD*.New Dheli: Motilal Banarsidass Publications Private limited. 1977

Jung, H (2001) tr. *Medicine Buddha Sutra*.International Buddhist Monastic Institution.

Kaelber, W.O. (2007) Aśrama. In Hindu World. Ed. by Sushil Mittal & Gene, T. Y. Routledge Taylor and Francs Group.

Kak, S.C. (2002) *Science in Ancient India Age*.http://www.Valentino_salvato.com/Astrology.ret. on 20.10.2010.

Kamata, S. (1999) Xuanzang and Prajnaparamita-hrdaya-sutra.The Silk Roads of Sanzohoshi Xuanzhuang ˜ His Legacy and our ˜ Future.*The Silk Roads Nara International Symposium'99* Record No.5. pp. 9-15. The Nara International Foundation.

Kapoor, S. (2003) ed. *Ancient Indian Sciences*. Vol. 1-3. New Dheli: Cosmo Publications.

Karey, F. F. (1918) *Ancient Indian Education: An Enquiry into the Origin, Development and Ideal*. London: Oxford Press.

Karrtumen, K. (1994) Yonas, Yavanas and Related Matter in Indian Epigraphy.*South Asian Archaeology 1993*, I, 329-336.

Kaw, M. K. (2001) ***Kaśmirian Pandits: Looking to the Future Kaśmir Education, Culture and Science Society*****. New Dheli: Nangia A.P. H. Publication Corporation**

Keith, A.B. (*n.d.*) A History of Sanskrit Literature. London: Oxford University Press

—(1992) ***TheSanskrit Drama in its Origin, Development, Theory & Practice.*****New Dheli: Motilal Banarsidass Publishers Private Limited**

Kelly, J. (2005) ***Milindapañha: The Questions of King Milinda*** **(Excepts), Access to Insight**

Kennedy, H. (1981) ***The Early Abbasid Caliphate Political History*****. Australia: Croom Helm Australia Ltd.**

Kenneth, A.R. Kennedy & Gregory, L. Possehl (1984) ed. Early Buddhism, Trade and Empire.In ***The Studies in the Archaeology and Paleoanthroplogy of South Asia.*****pp. 121-137. New Dheli: Oxford and IBH Publishing American Institute of Indian Studies (chk for authors).**

Khan, A. Nabi (2009) Gandhāra Art of Pakistan. In ***Gandhāra:The Buddhist Heritage of Pakistan, Legends, Monasteries and Paradise.*****pp. 170-175. Organisation der Vereinten Nationen fur Bildung, Wissenschft und Kultur. An Exhibition Under the Auspices of UNESCO Silk Road Exposition.**

Khettry, S. (2001) Origin of the Image of Manjuśri. ***Journal of the Asiatic Society,*** **XLIII, 4, 22-42.**

Khokar, M, Z (2003) ***From Peshawar to Quetta*****. Lahore: Rifahi Printers. (in Urdu)**

Kieschink, J. (2003) ***The Impact of Buddhism on Chinese Material Culture*****. Princeton Paperback.**

—(*n.d*) ***The Symbolism of the Monk's Robe in China*****.http://www.ihp.sinica.edu.tw. Ret. on 10.10.2010**

Kinnard, J. N. (2001) ***Imagine Wisdom: Seeing and Knowing in the Art of Indian Buddhism.*****New Dheli: Motilal Banarsidass Pvt. Publishers.**

King, R. (1999) ***Indian Philosophy: An Introduction to Hindu and Buddhist Thought*****. Edinburgh: Edinburgh University Press.**

Kiyota, M. (1991) (ed) ***Mahāyāna Buddhist Meditation: Theory and Practice*****. University of Hawai Press**

Koewn, D. (2003) ***A Dictionary of Buddhism*****.Oxford University Press.**

Konow, S. (1929) ***Kharoshthī Inscriptions. II*** **(1)Government of India. Calcutta: Central Publication Branch.**

Kragh, U.T. (2011) Appropriation and Assertion of the Female Self: Materials for the Study of the Female Tantirc Master Lakṣmī of Uḍḍiyāna. ***Journal of Feminist Studies in Religion*****. 27 (2), 85-108.**

Kramrisch, S. (*n.d*) ***The Hindu Temples.*****Vol.one. Dehli: Motilal Banarsidass Publishers Pvt. Ltd.**

Krishan, Y. (Dec. 1982) The Origin and Development of the Bhiddhissattva Doctrines. ***East & West,*** **32 (1-4), 199-232.**

Krishan, Patnaik & Sharma (1989) ***Aspects of Human Communication*****.New Dheli: Mittal Publications**

Kritzer, R. (2005) ***Vasubandhu and the Yogācārabhumi: Yogācāra Elements in the Abhidharmakośyabhāsya*****. Tokyo: The International Buddhist Studies.**

Kumar, Y (2005) ***A History of Sino-Indian Relations: 1st C. AD to 7th C. AD*****. S. B. Nangia. APH Publishing Corporation**

Kuritz, P. (1988) ***The Making of Theatre History*****. N.J: Englewood Cliffs.**

Kuwayama, S. (2006) Pilgrimage Route Changes and the Decline of Gandhāra. In ***Gandhāran Buddhism: Archaeology, Art and Texts*****. Brancaccio and Kurt Behrendt ed. Pp. 107-134. Toronto: UBCPress, Voncouver.**

Lahiri, L. (2009) Interpretation of Buddhist Terminology at the background of Chinese Traditional Thought.In ***Gems of Buddhism.*****Ed by Satyapala, B. pp. 43-50. New Dheli: MD Publications Private Limited.**

—(1995) ***Chinese Monks in India.*****I Ching.New Dheli: Motilal Banarsidass Publisher Private Limited. 1986**

Lal, B.B. (1998) Rigvedic Aryans: The Debate Must Go on. ***East & West,*** **48 (3-4), 444-446.**

Lanman, C.R. (1896) ***Buddhism in Translations, Warren*****. Harvard Oriental Series.Vol. 3. Cambridge, Massacussetts: Harvard University Press. 1922.**

Leningard, O.B. (1932) ***The Doctrine of Prajna-Paramita: as exposed in the Abhisamayālamkara of Maitreya*****. Reprint from Acta Orientalia. Vol.XI**

Levy, M. (1973) ***Arabic Pharmacology: An Introduction Based on Ancient and Medieval Sources*****. E.J. BRILL**

Lewis, T. T. (2000) ***Popular Buddhist Texts from Nepal: Narrations and Rituals of Newar Buddhism.*** **Albany: State University of New York Press.**

Li, Chonfeng (forthcoming) Representation of the Buddha's Parinirvāna in the Cetiyagharas at Kizil, Kucha I. In ***Buddhist Narratives*****.pp. 3-23.**

—(2011) Gandhāra, Mathurā and Buddhist Sculptures of Medieval China. In ***Kushans: Recent Discoveries and Interpretations*****. pp. 382-395. New Dheli.**

—(2008) The Geography of Transmission: The "Jibin" Route and the Propagation of Buddhism in China. In ***Kizil on the Silk Road: Crossroads of Commerce & Meeting of Minds.*****Ed. by Rajeshwari Ghose.Mumbai. pp. 23-32.**

Lieu, J.L (2006) ***An Introduction to Chinese Philosophy: From Ancient Philosophy to Chinese Buddhism*****. Blackwell Publications.**

Litvinvski, B.A. Zhang Guang-DA and R. Shabani Samghabadi (1999) ***History of Civilizations of Central Asia*****.vol III.New Dheli: Motilal Banarsidass Publications. Pvt. Ltd.**

Litvinsky, B. (1989) New Materials on the History and Culture of Gilgit.***Information Bulletin*****,15, 26-37.**

Liu Xinru (1988) ***Ancient China and Ancient India: Trade and Religious Exchanges AD 1-600*****. Dehli: Oxford University Press**

Loizze, J (2011) Personal Agency Across Generations: Evolutionary Psychology or Religious Beliefs. ***SOPHIA*****, 50, 429-452.**

Lowe, K (*n.d*) *Power and Institutional Identification in Renaissance Venice: The Female Convents* of S.M. Delle Vagini and S. Zaccana.http://www.helsinki.fi/collegiums/e-series/volumes. ret. on 19.4.10

Lyall, E (1984) Biographies of Aśvaghoṣa, Nāgarjūna, Aryadeva and Vasubandhu: translated from Vassilief's work on Buddhism. *The Indian Antiquity.Ed.by Burgess, JAS.141-145.*

Maclean, D.H. (1989) *Religion and Society in Arab Sind*.E.J. Brill Leiden. The Netherlands

Majno (1975) The Healing Hand: Man and Wound in the Ancient World. USA: Harvard College

Majumdar, A. K. Basu (1993) *Rabindranath Tagore: The Poet of India*. New Dheli: Indus Publishing Co.

Majumdar, R. C. (1960) *The Classical Accounts of India*. Calcutta: Firma K.L. Mukhopahyay.

—(1953) *The Age of Imperial Unity*. Bharatya Vidya Bhavan

Marshall, J. (1975) *Taxila: An Illustrated Account of Archaeological Excavations*. Vol. 1. Dehli: Bhartiya Publishing House. Reprint

—(1951) *Taxila: An Illustrated Account of Archaeological Excavations.* Vol. II. Cambridge University Press.

—(1936) Exploration at Taxila.*ASI-Annual Report 1930-34* (part one), 16-199.Ed. by Fabri, C.L.

—(1931) Exploration at Taxila.*ASI-Annual Report 1927-28*, 54-67. Ed. by H. Hargreaves.

—(1930) Sirkap Excavation.*ASI-1926-27*, 110-119.

—(1927) Sirkap Excavations.*ASI-1924-25*.ed. by J. F. Blackiston, 49-50.

—(1918) Excavation at Taxila.*ASI- 1915-16*, 1-38.

—(1916) Excavation at Sahri Bahlol.*ASI-Anual Report 1912-13*, 1-53.

—(1915) Exploration at Taxila.*ASI-Annual Report 1911-12*, 95-119.

Mc Crindle, J.W. (1984) Translation of the Indica of Arrian.*The Indian Antiquity: 1872-1933*. Ed. by Burgess, JAS, 85-108. 1876

—(1979) *Ancient India as Described in Classical Literature*. New Dheli: Oriental Books Reprint Corporation.

Mc Gree, M. (2000) State Responsibility for Environmental Management: Perspectives from Hindu Texts on Polity. In *Hinduism and Ecology: The Intersection of Earth, Sky and Water*. pp. 59-100. Massachusetts: Harvard University Press.

Mc Govern, W.M. A. (2000) *Manual of Buddhist Philosophy and Cosmology*. Vol. 1. London: Routledge: 1923.

Mc Nair, A. (2007) *Donors of Longmen: Faith, Politics, and patronage in Medieval Chinese Buddhist Sculpture*. Honolulu: University of Hawaii Press.

Mieder, W. (2004) *Proverbs: A Handbook*. USA: Greenwood Publishing Group Inc.

***Merriam Webster's Encyclopedia of Literature* (1995). USA: Merriam Webster Inc.**

Michell, A. (2010) Islamic Sufism and Education for Peace.*Spirituality, Religion and Peace Education.*Ed.by Edward, J. Jing Lin and John P. Miller. USA: Information Age Publishing.

Michell, G. (1995) *Architecture of the Islamic World*. London: Thames and Hudson.

Miles, M. (2010) Including Disabled Children in Indian Schools, 1790s-1890s: Innovations of Educational Approach and Techniques. Paedagogica Historica: International Journal of the History of Education. London: Routledge. http://www.informaworld.com

Miller, F. M. (ed) (1900) *The Sacred Books of the East*. Vol. XI.Oxford at the Clarendon Press.

—(1881) *The Sacred Books of the East*. Vol. X. Oxford at the Clarendon Press.

Mills, A.M., Peter J. Claus and Sarah, D. (2003) *South Asian Folk Lore: An Encyclopedia*. N.Y.: Routledge

Minallah, F. A. (2007) ***Glimpses of Islamabad's Soul.*** **Islamabad: Sungi Development Foundation.**

Mira, S. & Shyan, M. (1990) ***Yoge: The Iyengar way*****. Italy: New Interlitho**

Mittal, K. K. (2009) Buddhist Epistomology: The number of Pramanas. In ***Gems of Buddhism*****.Ed. by Satyapala, B. pp. 35-38. New Dheli: MD Publications Private Limited**

Mitrikeski, D. (2011) On Punyaparināmanā in Nāgārjuna's Works. ***Journal of Religious History*****, 35 (1), 91-105**

Mizuno, K. (1969) ***Primitive Buddhism*****. tr. by Kosho Yamamoto. Japan: The Karinbunko**

Mizuno, S. & Nagahiro, T (1955) ***Yun-Kang: Cave Six*****. Vol III. Text. Kyoto University: Jimbunkagaku Kenkyusho**

Mookerjee, B.N. (1995) The Impact of Early Foreign Coins on Indian Minting Technique and Metrology.In ***Foreign Coins Found in the Indian Subcontinent*****. Ed. Macdow ll, D.W and Amiteshwar Iha.Indian Institute of Research in Numismatics Studies. India**

Mookerjee, R.K. (2003) ***Ancient Education System: Brāhmanical and Buddhist*****. Motilal Banarsidass Publications Pvt Ltd: 1947, 1951, 1960, 1974, 1989, 1998.**

—(1955) ***Aśoke (Gaekwad Lectures)*****. Dehli: Raj Kamal Pblications Limited**

Morgan, K.W. (1956) ***The Path of Buddha: Buddhism Interpreted by Buddhist*****. New York: The Ronald Press Co.**

Monier-Williams Sanskrit-English Dictionary (1964).New Dheli: Motilal Banrsidass Pvt. Ltd.

Muller, F.M. (1896) ***A Record of the Buddhist Religion as Practiced in India and Malay.*** **Bibliolife LLC.**

Muraleemadhavan, P. C. ed. (2002) ***Indian Theories of Hermeneutics*****. Dehli: New Bharatiya Book Corporation.**

Nagamia, H. F. (Oct. 2003) Islamic Medicine History and Current Practices.*Journal of the International Society for the History of Islamic Medicine,* 2 (4), 24-35.

Nagao, J.A. Silk (2000) *Wisdom, Compassion, and the Search for Understanding: The Buddhist Studies of the Legacy of Gadjin, M. Nagao, J. A. Silk*. ed. Studies in the Buddhist Tradition 3. Honolulu: University of Hawaii Press.

Nagrajji, A.S.D. Litt (2003) *Agama and Tripitaka: A Comparative Study of Lord Mahavira and Lord Buddha.* Vol. II. Language and Literature. Concept Publishing Co.

Nakamura, H. (1989) *Indian Buddhism: A Survey with Bibliographic Notes*. Motilal Banarsidass Publications Private Limited. 1987, 1989, 1996.

Naqvi, N.H. (2003) Surgical Instruments in the Taxila Museum.*Medical History,* (47), 89-98. http:// www.ncbi.nlm.nih.govt/pmc.articles/PMC. Ret. on 15.10.2010.

Narang, S. J. (2006) *Designing Websites: According to the Ancient Science of Directions*. New Dheli: Sterling Publishers Ltd.

Narasu, P. L. (1948) *The Essence of Buddhism*. Bombay: Thacker and Co. Ltd

Nariman, J.K. (1992) *Literary History of Sanskrit Buddhism.* Dehli: Manohar Book Service

Nattier, J. (2008) *A Guide to the Earliest Chinese Buddhist Translations: Texts from the Eastern Han and Three Kingdoms.* Tokyo: The International Research Institute for Advanced Buddhology.

Needham, J. (1972) *Science and Civilization in China*. Vol. III. UK: Cambridge University Press. 1959. 1970.

Olivieri, L. M. (2009) The Swat Case Study: Barikot and Its Environs. In *Buddhist Heritage of Pakistan: Legends, Monasteries and Paradise.*pp. 294-297. In Organisation der Vereinten Nationen fur Bildung, Wissenschft und Kultur. An Exhibition under the Auspices of UNESCO

Pant, M. & Shūji Funo (2007) *Stupa and Swastika: Historical Urban Planning Principles in Nepal's Kathmandu Valley*. Japan: Kyoto University Press.

Parlato, S. (1979) A Brāhmi Inscription on a Mud Plaster Floor Tapa Sardār, Ghazni. *East and West,* 29 (1-4), 265-269.

Passi, A. (Dec. 1982) Some Preliminary Considerations on Aśvaghoṣa Saundarananda (I).*East and West,* 32 (1-4), 65-74.

Patton, L.L. (2008) Ṛṣis Imagined Across Differences: Some Possibilities for the Study of Conceptual Metaphor in Early India. *The Journal of Hindu Studies, 1,* 49-76.http://jhs.oxford.journals.org/content. Ret on 5.11.10

Peter, J. Claus, Sarah Diamond, & Margaret Ann Mills (2003) *South Asian Folk Lore: An Encyclopedia: Afghanistan, Bangladesh, India, Nepal, Pakistan &Śri Lanka*. NY: Rouledge.

Perry, M. (1990) *Western Civilization: A Brief Survey*.vol. 1: To 1789. Boston: Hughton Mifflin Co.

Phyllius, J. Jestice (2004) *Holy People of the World: A Cross Cultural Encyclopedia*. ABC-CLIO, Inc.

Plofker, K. (2009) *Mathematics in India.* New Jersy: Princeton University Press.

Potter, K.H. (2003) *Encyclopedia of Indian Philosophies: Buddhist Philosophy from 350 to 600 AD.* Vol. IX. New Dheli: Motilalal Banarsidass Pvt. Ltd.

Prakash, B. (1976) *Political and Social Movements in Ancient Punjab*. Lahore: Aziz Publishers.

Prebish, C.S. (ed) (1994) *Buddhism: A Modern Perspective*. USA: The Pennsylvania State University

Prioreschi, P. (2004) *A History of Medicines: Byzantine and Islamic Medicines*. Vol. II. Omaha: Horatius Press.

Pubaiev, R. & N. Bolosokhoiva (1989) Tibetan Buddhism and its Role in the History of Culture of Central Asian Peoples in the Middle Ages. *Information Bulletin,* 16, 98-102.

Puri, B.N. (1983) *Buddhism in Central Asia*.New Dheli: Motilal Banarsidass Publications Pvt. Ltd.

Pushp, P. N. (2001) Buddhist Contours of Kaśmir History and Culture.*The Journal of Central Asian Studies,* I (1), 33-46.

Qamar, M. S. (2004) A Preliminary Report on the Excavation of a Buddhist Site at Nawagai, Tehsil Barikot, Swat. *East and West*, 54 (1-4), 181-221.

Qizhi, Z. (2004) *Traditional Chinese Culture*. Beijing: Foreign Language Press

Rahman, A. (1993) Recent Developments in Buddhist Architecture of Pakistan. *South Asian Studies*. 9, 105-108

3.2 Rajesh, K. (1999) "On the Identification and Chronology of the Ṛgvedic River Sarasvati", *in Roger Blench, Mathew Sprigs (eds.) Archaeology and Language III, Artefacts, Languages and Texts. Routledge*

Rangarajan, L.M. ed (1992) *Kautilya: The Arthaśāstra*. Penguin Books India

Rashid, S. (2005) *The Salt Range and the Potohar Plateau*. Islamabad: Sang-e-Meel Publications

Ratanakul, P. (2004) *Buddhism Health and Disease*. Eubios Journal of Asian and International Bioethics, 15, 162-164. http://www.eubios.info/EJI45. ret. on 03.04.10.

Reagon, T. (2005) *Non-Western Educational Traditions: Indigenous Approaches to Educational Thought and Practice.*Lawrence Erlbaum Association Incorporation Publications.

Reddy, S. (2002) India-China Cultural Synthesis-Contributions to Medicines.In *History of Science, Philosophy and Culture in Indian Civilization*. pp. 313-330. Vol III. Part 2. London: Oxford University Press.

Rehman, S. Khattak, H. & Faiz-ur-Rehman (1996) The Archaeological Explorations in Buner (1991-92 and 1992-93).In *The Archaeological Reconnaisance of Gandhāra*.Ed.by Saeed-ur-Rehman. pp. 1-29. The Department of Archaeology of Pakistan.

Reichelt, K.L. (1953) *Meditation and Piety in the Far East*. England: James Clarke & Co.

Rhie, M. M (2002a) *The Eastern China and Sixteen Kingdoms Period in China and Tumshuk, Kucha and Karashahr in Central Asia.* Brill

—(2002b) *Early Buddhist Art of China and Central Asia*.Vol. Two. London: Leiden

Rhi, J. (2006) Bodhisattvas in Gandhāran Art: An Aspect of Mahāyāna in Gandhāran Buddhism. In *Gandhāran Buddhism*. Ed. By Brancaccio and Kurt Behrendt. Pp. 151-182. Toronto: UBC Press, Vancouver.

Rhys David, T. W (1903) *Buddhist India.*New Dheli: Munshiram Manoharlal Publishers Private Limited 1999

—(1881) *Buddhism, Buddhist Birth Stories, Buddhist Suttas from the Pali, Hibert lectures.*http://www.1902encyclopedia.com. ret. On 13.09.2011

—(*n.d*) A Buddhist Manual of Psychological Ethics. Vol. XII (Dhammā Sangini). Royal Asiatic Society.

Richmond, F. P., Darius, L. Swann, Phillip B. Zarrilli (ed.) (1993) *Indian Theatre: Traditions of Performance*. Motilal Banarsidass Press: 1990. University of Hawaii Press.

Risley, H. H. (1977) *People of India*. Lahore: Al-Bīrūnī. 1908

Rodda, J.C & N.C. Matalas (1987) "Water for the Future: Hydrology in Perspective". In Proceedings of the Rome Symposium.IAHS.Publication no. 164, 1987.http://www.itiantua.gr/hsj/Raynal-Villasenor, J.A. redbooks. ret. on 6.10.10

Robins, R. H. (1997) *A Short History of Linguistics*. London. Longman

Rongxi, Li (1995) *The Geat Tang Dynasty Record of the Western Regions.* Numata Center for Buddhist Translations & Research. California

Sachau, E. C. (tr) (1910) *Al Beruni's India*: An Account of the India about AD 1030. Kagan Paul Trench Trubner & Co. Ltd. London

Sach, R. (2001) *Tibetan Ayurveda: Health Secrets from the Roof of the World*. Healing Arts Press.

Said, H. M. (2003) Medicines and Pharmacology: Chinese, Indian, Tibetan and Greaco-Arab Influences.In *History of Civilizations of Central Asia* .ed. by C. E. Bosworth & M. S. Asimov.pp. 318-322. Vol. IV. Part Two. New Dheli: Motilal Banarsidas Publishers Private Ltd.

Salamon, R. (2005) The Name of Taxila. ***East & West,*** **55 (1-4), 265-277.**

—(2003) Three Kharosthī Reliquary Inscriptions in the Institute of Silk Road Studies.*Silk Road Art and Archaeology*, 9, 39-70.

—(1999) ***Ancient Buddhist Scrolls from Gandhāra: The British Library Kharoshthi Fragments.*****University of Washington Press.**

—(1998) ***Indian Epigraphy: A Guide to the Inscriptions in Sanskrit, Prakrit and Other Indo Aryan Languages.*****New Dheli: Munshiram Manoharlal Publishers Pvt. Ltd. 1903.**

Salguero, E.P. (2008) The Buddhist Medicine King in Literary Context: Reconsidering an Early Medieval Example of Indian Influence on Chinese Medicines and Surgery. ***History of Religions.*****pp. 183-210.http://www.journals.unchicago.edu.ret.on 25.5.10**

—(*n.d*) ***The History of Traditional Thai Medicine Reconsidered*****. http://www.gainwithoutpain.net. Ret. on 25.05.10.**

Sankalia, H.D. (1934) ***The University of Nalanda*****. Madras.**

Śankarnarayan, K. Dr. (Mrs) (1999) Xuanzang's Contribution to Buddhism.In ***The Silk Roads Nara International Symposium 1999.*****Session II.pp. 24-29.**

Sarao, K.T.S. (2010) ***Urban Centres and Urbanisation: as Reflected in the Pāli Vināya and Sutta Pitakas.*** **Munshiram Manoarlal Publisher Private Limited.**

—(2002)*Origin and Nature of Ancient Indian Buddhism*.Department of Buddhist Studies. University of Dehli. 1989. 1999.

Sardar, B. (2007) ***Rock Art of Swat: A Study of Carving, Inscriptions and Paintings.*** **Ph.D Thesis.Taxila Institute of Asian Civilizations. Quaid-i-Azam University**

Śāstri, K. A. N. (ed) (1957) ***A Comprehensive History of India.*****Vol. 2. The Indian History Congress & the Bharatiya Itihas Parishad: 1974, 1987, 1998.**

Śāstri, H.C (*n.d.*) ***The Philosophy of Nāgājuna as Contained in the Ratnāvāli.*****Part 1. Calcutta: Saraswat Library.**

Sayili, A. (1980) The Emergence of the Prototype of the Modern Hospital in Medieval Islam. *Turkish Review Bulletin*, 44 (174), 279-286. http://www.muslimheritage.com. Ret on from 26.4.10

Scharfe, H. (2002) *Education in Ancient India*. Vol. 16. The Netherlands: Koninklijke Brill NV, Leiden.

Schober, J. (2002) *Sacred Bibliography in the Buddhist Traditions of South and Southeast Asia.*New Dheli: Motilal Banarsidass Pub. Pvt. Ltd. 1997

Scialpi, F. (1984) The Ethics of Aśoke and the Religious Inspiration of the Achaemenids. *East and West,* 34 (1-3), 55-74.

Seeley, L. (1899) *History of Education*. American Book Cooperation

Sen, S. N. (1990) *Ancient Indian History and Civilization*. New Age International (P) Limited Publishers

Sen, T.(2003) *Buddhism, Diplomacy, and Trade: The Realignment of Sino-Indian Relations, 600-1400.*The Association for Asian Studies.University of Hawaii Press.

—(2002) The Revival and Failure of Buddhist Translations During the Song Dynasty. In *T'oung Pao.*Second Series.pp. 27-80, 88.FASC 1/3.

Shankardass, M. K. (2002) India's Interaction in Medical Knowledge and Practice. In *History of Science, Philosophy and Culture in Indian Civilization.*pp. 274-296. Vol III. Part 2. London: Oxford University Press.

Shashibala (2002) Buddhist Art from Northwest to Far East. In *Bamiyan: Challenge to the World Heritage*. Ed. by Warikoo, K. pp. 95-103.New Dheli: Bhavana Books and Prints.

Shaw, S. (2006) *Buddhist Meditation on Anthology of Texts from Pāli Canon.* USA: Routledge.

Shendge, M. (1977) *The Civilized Demons: The Harappans in Ṛgveda*. Dehli: Abhinav Publications.

Sherburne, R. S. J. (2000) tr. *A Complete Works of Atiśa, Śri Dipamkara Jnana, Jo-bo-rje: The Lamp for the Path.* Dehli: Aditya Prakshan.

Shri Nagarajj D. Litt (2003) ***Agama and Tripitake: A Comparative Study of Lord Mahavira and Lord Buddha*****. Vol. II Language and Literature.New Dheli: Concept Publishing Co.**

Siddique, Khan Sahib A.D (1937) Excavations at Taxila.*ASI-Annual Report 1934-35,* 28-31. Blackiston, J.F. ed. Dehli: Manager of Publications 1937

—(1940) Excavations at Taxila. ***ASI-Annual Report 1936-37*****.pp. 36-38.**

Śrivastave, K. S. (2003) ***A Legacy of Culture and Civilization of Indian Sub-Continent*****. New Dheli: Sangeeta Prakashan.**

Singh, N. K. (2000) ***Encyclopedia of Hinduism*****. Vol. 1.New Dheli: Anmol Publications**

Singh, R.P.K (2009) ***Encyclopedia of Monasticism.*****New Dheli: M.D. Publication Private Limited.**

Singh, U.A. (2008) ***A History of Ancient and Early India: From Stone Age to the 12th C. AD*****. Dorling Kindersley (India) Pvt. Ltd.**

—(2004) ***The Discovery of Ancient India: Early Archaeologists and the Beginnings of Archaeology.*** **Ehli: Permanent Black.**

Smith, V.A. (1999a) ***The History of India*****. Atlantic Publishers & Distributers**

—(1999b) ***Kulhana's Rajatarangini: A Chronicle of the Kings of Kaśmir*****. New Dheli: Motilal Banarsidass Publications.**

Soothill, W.E. & Lewis, H (2004) ***A Dictionary of Chinese Buddhist Terms: With Sanskrit and English*****. London: Routledge Curzon.**

Soper, A. S. (1959) ***Literary Evidence for Early Buddhist Art in China*****. Switzerland: Acona Artibus Asaie Publishers.**

Southworth, F.C. (1997) Reconstructing Social Context from Language: Indo-Aryan and Dravadian Prehistory. In ***The Indo-Aryans of Ancient South Asia: Language, Material Culture and Ethnicity*****. Ed. by George Erdosy.pp. 255-277. New Dheli: Munshiram Manoharlal Pub. Pvt. Ltd.**

Spagnesi, P. (2006) Aspects of the Architecture of the Buddhist Sacred Areas in Swat.*East and West*. 56 (1-3), 151-175.

Sparham, G. (1993) tr. ***Ocean of Eloquence: Tsong Kha Pa's Commentary on the Yogācāra Doctrine of Mind.*** **Albany: State University of New York.**

Spooner, D. B (1916) Excavation at Takht-i-Bahi.*ASI-Annual Report 1912-13,* 132-148.

— (1914) Excavation at Sahri Bahlol.*ASI-Annual Report*, 46-62.

—(1912) Excavation at Shah Ji Ki Dheri.*ASI-Annual Report 1908-9,* 38-59

—(1909) Excavation at Sahri Bahlol.*ASI-Annual Report 1906-7,* 102-118.

Spring, J. (1994) ***Wheels in the Head*****. NY: McGraw Hill, Inc.**

Srinivasan, D. M. (2009) ***Gandhāra: The Buddhist Heritage of Pakistan: Legends, Monasteries, and Paradise.*****pp. 116-121.Organisation der Vereinten Nationen fur Bildung, Wissenschft und Kultur. An Exhibition Under the Auspices of UNESCO**

Srivastave, K. S. (2003) ***A Legacy of Culture and Civilization of Indian Sub-Continent.*****New Dheli: Sangeeta Prakashan**

Stavisky, B.J. (1993/94) The Fate of Buddhism in Middle Asia. ***Silk Road Art and Archaeology, 3,*** **113-142.**

Stearns, P. N. ed (1994) ***Encyclopedia of Social History*****. Library of Congress Cataloguiging-in-Publication Data.**

Stearns, P. N. & William, L. L. (Gen. ed) (2001) ***The Encyclopedia of World History: Ancient, Medieval and Modern.*****Sixth ed. Houghton Miffin Co. originally ed. by William Leonard Langer.**

Stein, D. (1995) ***Essential Reiki: A Complete Guide to an Ancient Healing Art*****. USA: The Crossing Press.**

Stein, M.A. (1989) ***Kalhana's Rajatarangini: A Chronicle of the King of Kaśmir*****. New Dheli. Motilal Banarsidass Publications Pvt. Ltd**

—(1915) Excavations at Sahr-i-Bahlol.*ASI-1911-12*, 95-119

—(1901) Archaeological Discoveries in the Neighbourhood of the Niya River.*The Journal of the Royal Asiatic Society of Great Britain*, 569-572.

Suidmark, J. (1993) A Group of Three Standing Female Deities from Kaśmir and Their Antecentdent in Late Gandhāran Art.*South Asian Archaeology,* I, 681-694.

Sukla, D. (1980) *Socio-Economic Life of Northern India*. Abhinav Publications.

Sutton, F.G. (1991) *Existence and Enlightenment in the Lankāvatāra Sūtra: A Study in the Ontology and Epistemology of the Yogācara School of Mahāyāna Buddhism.*State University of New York Press.

Suzuki, P. T. (2008) *Manual of Zen Buddhism.* Biblio Bazaar. 1935

Suzuki, D. T. (1930) *Studies in the Lankavatara Sutra*. London: George Routledge and Sons Ltd.

—(1956) *The Lankavatara Sutra: A Māhayāna Text.* London: Routledge and Kegan Paul Ltd.

Swāti, M.F.(2007) Special Features of the Buddhist Art in the Swat Valley (Reprint) Ancient Pakistan, XVIII, pp. 105-157.

—(1997)"Pre-Kushana Reliquaries from Swat", Journal *of the Royal Asiatic Society,* 3, 7, 2, pp. 249-255.

—(1996) *Gandhāra Art in the Swāt Valley, Pakistan: A Study Based on Peshawar University Collection*. Ph. D Thesis.Faculty of Oriental Studies.University of Cambridge.

Takakusu, J. (1998) (reprint) *Essential of Buddhist Philosophy*.New Dheli: Motilal Banarsidass Publications Private Ltd. 1947, 1949, 1956, 1975, 1978.

Takashi, T. (1981) A Note on the Rural Community and Education in Thailand. *East Asian Cultural Studies,* XX (1-4), 135-153.

Tarn, W. W. (1938) *The Greeks in Bactria and India*. UK: Cambridge University Press

Thakar, V. (1991) *Glimpses of Raja Yoge: An Introduction to Patanjali's Yoge Sutras.* India: Vimal Pradakshan Trust. Ahmadabad.

Thakur, U. (1974) *Some Aspects of Ancient Indian History and Culture.*New Dheli: Abhinav Publications

—(1986) *Some Aspects of Asian History and Culture*.New Dheli: Shakti Malik, Abhinav Publications.

***The New Encyclopaedia Britannica* (1995) Vol. 13. Chicago: Macropedia Encyclopaedia Britannica Inc**

Thomas, E.J. (2004) *The History of Buddhist Thought*. Asian Educational Services.

Tissot, F. (1993) Sahrī-bālol (Part IV).*South Asian Archaeology*, 11, 733-744.

Tōru, Ō. (1981) The Development of Education in Burma. *East Asian Cultural Studies*, XX (1-4), 107-133.

Toshkandi, S. S. (2002) Looking Back in Time: Historical, Cultural and Artistic Links Between Ancient Kaśmir and Afghanistan. In *Bamiyan*: *Challenge to the World Heritage*. Ed. by Warikoo, K. pp. 75-88.New Dheli: Bhavana Books and Prints.

Toynbee, A. J. (1948) *A Study of History*: *The Breakdowns of Civilizations*.Vol. II. London: Oxford University Press. 1934, 1935, 1939, 1945.

___(1947) A Study of the History: Abridgement of the Vol. I to VI. Oxford University Press

Townsand, M. L. *et al* (*n.d*) *Geauga County Ground-Water Resources.*The Ohio State University.http://www.google.com. ret. on 29.09.10.

Tucci, G. (1940) *Travels of Tibetan Pilgrims in the Swat Valley.* Calcutta: The Greater India Society.

Uchida, D. S. (2002) Looking Back in Time: Historical, Cultural and Artistic Links Between Ancient Kaśmir and Afghanistan. In *Bamiyan: Challenge to the World Heritage*. Ed. by Warikoo, K. pp. 104-106.New Dheli: Bhavan Books and Prints.

Valeryevna, I.S. (2009) *Orthodox Monasterial Complex in Contemporary Socio-cultural Environment*.pp. 301-306, 102. Section IV. Springer Netherlands.

Vassiliades, D. th. (2000) *The Greeks in India: A Survey in Philosophical Understanding.*New Dheli: Munishiram Manoharlal Publication Private Limited

Vassiliev, B. (1937) 'Ju-shih-Lun'-a Logical Treatise Ascribed to Vasubandhu.*Bulletin of the School of Oriental Studie,* 8 (4), 1013-1037.

Vasubandhu & Stafon (1998) ***Seven Works of Vasubandhu: The Buddhist Psychological Doctor*****. New Dheli: Motilal Banarsidass Publications. 1984**

Venkateswara, S. V. (2007) ***Indian Culture Through the Ages: Education and the Preparation of Culture*****.http://www.google.com. ret. on 10.05.10**

Verma, S. P. (2005) ***Ancient System of Oriental Medicine*****. New Dheli: Anmol publications Pvt. Ltd.**

Verma, T. P. (*n.d.*) Physical and Historical Geography of Gandhāra. In ***Buddhism and Gandhāra Art.*****Edited by R. C. Sharma and Pranati Ghosal.pp. 35-38. New Dheli: Aryan Books International.**

Virardi, G. (2011) Buddhism in Northwest India and Eastern Afghanistan Sixth to Ninth Centuries AD. ZINBUN. No.43.

Vose, K. (2010) Authority in Early Prāsanjika Madhyamaka. ***Journal of Indian Philosophy*****, 38, 553-582.**

Wallace, V. A. (2001) ***Inner Kalacakra Tantra: A Buddhist Tantric View of the Individual*****. Oxford Press Incorporated**

Walser, J. (2005) ***Nāgarjūna in Context: Māhayāna Buddhism and Early Indian Culture*****. New York: Columbia University Press.**

Waley, A. (1952) ***The Real Tripitaka*****. London: George Allen & Unwin Ltd.**

Warder, A.K. (1990) ***Indian Kāvya Literature*****.Vol 2.Motilal Banarsidass Publishers Pvt. Ltd. 1974.**

Warthington, V.(1982) ***A History of Yoga.*** **London: Routledge and Kegan Ltd.**

Watson, B. (1997) ***The Vimalkirti Sutra: from the Chinese version of Kumarajiva*****. New Dheli: Motilal Banarsidass Private Limited**

—(1993) ***The Lotus Sutra*****. New York: Cambridge University Press**

Watters, T. (1904) ***On Yuan Chwang's Travels in India: 629-645 AD*****.Ed.by T.W. Rhys David and S.W. Bushwell. Vol. XIV. London: Royal Asiatic Society.**

Wayman, A. (1997) ***Untying the Knots in Buddhism: Selected Essays.*****New Dheli: Motilal Banarsidass Publications Pvt. Ltd**

Weber, A. (1904) ***The History of Indian Literature*****. London: Trubner & Co**

White, D.G. (2004) ***The Alchemical Body: Siddha Traditions in Medieval India*****. New Dheli: Munshiram Manoharlal Pub. Pvt. Ltd.**

Whitefield, S. (2004) ***The Silk Road: Trade, Travel, War and Faith*****. Serindia Pub.**

Wiegand, W. A & Donald G. Davis ed. (1994) ***Encyclopedia of Library History*****.Library of Congress Cataloging-in-Publication Data.**

Willemen, C. Bart, D. & Collett, C. (1997) ***Sarvāstivāda Buddhist Scholasticism*****.Vol. 11.Part 2. The Netherlands: Koninklijke Brill**

Williams, M. (1889) ***Buddhism in its Connexion with Brāhmanism and Hinduism and in its Contrast with Christianity.*** **London: Cambridge University Press.**

Williams, P. (2008) ***Māhāyāna Buddhism: The Doctrinal Foundations*** **2nd Edition. Taylor & Francis e-Library**

—(2005) ***Buddhism: Critical Concepts in Religious Studies*****.Vol. 1. Routledge: London**

Wilson, H.H. (1862) ***Essays and Lectures: Chiefly on the Religion of the Hindus.*** **London: Trubne & Co**

Wink, A. (1991) ***Al-Hind, the Making of Indo-Islamic World: Early Medieval India and theExpansion of Islam 7th-11th Centuries AD.*** **Library of Congress Cataloging-in-Publication Data**

Winternitz, M. (1927) (reprint) ***A History of Indian Literature.*** **(tr. By Mr. Sketkar) New Dheli: Oriental Books Reprint Corporation. New Dheli. 1977**

Winternitz, M., Moriz Winternitz and Subhadra (2003) ***History of Indian Literature*****.Vol. 3. Dehli: Motilal Banarsidass Private Limited**

Witzel, M. (1997) ***Ṛgv*****edic History: Poets, Chieftains & Politics. In** ***Indo-Aryans of Ancient South Asia: Language, Material Culture & Ethnicity.*****Ed. by George Erdosy.pp. 307- 319. New Dheli: Munshiram, Manoharlal Publications Private Limited**

Wyne, A. (2007) ***The Origin of Buddhist Meditation.*** **Routledge: Taylor and Francis Group.**

Yifa (2002) ***The Origin of Buddhist Monastic Codes in China.*** **Honolulu: Univeristy of Hawai Press.**

Yong, W. (1999) The 'Nittoso' Who Learned From Xuangzang-Xuanzang's Influence over the Character Building of Dosho. The Silk Roads of Sanzohoshi Xuanzhuang ˛ His Legacy and our ˛ Future.In ***The Silk Roads Nara International Symposium'99*** **Record No.5.pp. 1-8. The Nara International Foundation.**

Young, D. Michiko, Y. & Tan Hong, Y. (2004) ***Introduction to Japanese Architecture.*** **Perplus Editions (HK) Limited**

Yun, H. (2000) ***Lotus in a Stream*****.Tom Graham (tr.). Tokyo: Weather Hill Inc.**

Yun, H, Manzo, T. and S. Chang (2009) (ed.) ***The Infinite Compassion, Endless Wisdom: The Pactice of the Bodhisattva Path.*** **Buddha Light Publishing, Los Angeles**

Yung-hsi (2005) tr. ***The Life of Huan-Tsang-Hui-li and Yen-tśung.*** **Akshaya Publishers**

Yuyuma, A. (2001) ***The Mahāvastu-Avadāna: In Old Palm-leaf and Paper Manuscript*****.1. Palm-Leaf manuscripts. Tokyo: The Center for East Asian Cultural Studies for UNESCO.The Toyo Bunko.**

Zürcher, E. (1972) ***The Buddhist Conquest of China*****. Vol. 2. The Netherlands: E. J. Brill, Leiden: 1959.**

___ (1968) "*The Yüch-chih and Kaniṣka in the Chinese sources*". Papers on the Date of Kaniṣka. Basham A.L. ed. 1968. Leiden: E.J. Brill. Pg. 346-393.

Tables

Table 1 The *Jātaka* Referring to the University Center of Taxila

Sr.No	Name	*Bk./Jat* No.	Content	Reference
1	**Asātamanta *Jat***	**I.61**		**Cowell 2002: 147 (Vol.I)**
2	**Durājāna *Jat***	**I.64**		**Ibid: 158**
3	**Varana *Jat***	**I.71**	**Teacher of World fame in *Takkaśila*; the students were shown busy in physical works**	**Ibid: 172:**
4	**Saccamkira *Jat***	**I.73**	***Boddhissattva* was born in Northwestern country**	**Ibid: 177**
5	**Sayha *Jat***	**IV.310**	**Taxila University**	**Cowell 2002: 20 (Vol.III)**
6	**Khantivādi *Jat***	**IV.313**	**Taxila**	**Ibid: 26**
7	**Tittira *Jat***	**IV.319**	**Taxila**	**Ibid: 43**
8	**Thusa *Jat***	**IV.338**	**Virtues of teachers; admission to Taxila University**	**Ibid: 80**
9	**Kesava *Jat***	**IV.346**	***Takkaśila* University; the band of ascetics were respected by king**	**Ibid: 93**
10	**Araññ̃a *Jat***	**IV.348**	**Ascetism; instructed in all arts at Taxila University**	**Ibid: 98**
11	**Sandhibheda *Jat***	**IV.349**	**Instructed in all arts at *Takkaśila* University**	**Ibid: 99**
12	**Bhisapuppha *Jat***	**V.392**	**Learned all arts at *Takkaśila***	**Ibid: 191**
13	**Dasannaka *Jat***	**VII.401**	**learned all arts at *Takkaśila* and became King's counselor**	**Ibid: 207**
14	**Sattubhasta *Jat***	**VII.402**	**learned all arts at *Takkaśila* and became the King's minister**	**Ibid: 210**
15	**Atthisana *Jat***	**VII.403**	**ascetic life; learned all arts at *Takkaśila* and took religious life**	**Ibid: 216**
16	**Gandhara *Jat***	**VII.406**	**Son of the King of Gandhara; *ref* to Kaśmir and Gandhara; king gave up his kingdom and took the religious life; people venerated the ascetics and built halls for them**	**Ibid: 221**
17	**Kumbhakāra *Jat***	**VII.408**	**Kingdom of Gandhara in the city of *Takkaśila*; teaching through parables**	**Ibid: 228**
18	**Susīma *Jat***	**VII.411**	**Son of priest and son of the King learned at *Takkaśila***	**Ibid: 237**
19	**Dhūmakāri *Jat***	**VII.413**	**Learned all arts at *Takkaśila***	**Ibid: 241**
20	**Jāgara *Jat***	**VII.414**	**Learned all arts at *Takkaśila*; *ref* to walking and standing meditation; teaching through riddles**	**Ibid: 243**
21	**Kummāsapinda *Jat***	**VII.415**	**Learned all arts at *Takkaśila* and became a Viceroy; *ref* to building of six halls of charity**	**Ibid: 244**

22	**Parantapa *Jat***	**VII.416**	**Learned all arts at *Takkaśila* and acquired a spell for understanding of all animal cries; *ref* to water tanks and stairs**	**Ibid: 249**
23	**Atthasadda *Jat***	**VIII.418**	**Learned all arts at *Takkaśila* and became a mystic; *ref* to charity and veneration for ascetics**	**Ibid: 256**
24	**Indriya *Jat***	**VIII.423**	**Learned all arts at *Takkaśila* and became an ascetic and attained perfection in meditation**	**Ibid: 276**
25	**Hārita *Jat***	**IX.431**	**educated at *Takkaśila*,**	**Ibid: 295**
26	**Culla-Bodhi *Jat***	**X.443**	***ref* to all sciences in Taxila**	**Cowell 2002: 13 (Vol.IV)**
27	**Nigrodha *Jat***	**X.445**	**Taxila University**	**Ibid: 22**
28	**Mahā-Dhamma-Pāla *Jat***	**X.447**	**World fame teachers at Taxila University**	**Ibid: 32**
29	**Maha-Mangala *Jat***	**X.453**	***Takkaśila*, became a hermit**	**Ibid: 46**
30	**Junha *Jat***	**XII.456**	***Takkaśila*; the teacher taught at night, *ref* to Gandhara.**	**Ibid: 61**
31	**Kāma *Jat***	**XII.467**	***Takkaśila* University**	**Ibid: 104**
32	**Janasandha *Jat***	**XII.468**	***Takkaśila***	**Ibid: 109**

Key:

Bk: Book

Jat: Jātaka

ref:refer/rferring

Table 2: The Buddha's Education

Sr. No	Gandhāra Relief	Found from	Placed in	Source
1	**Siddharta first day in school**	**Sikri**	**Lahore**	**Ingholt 1957: Fig. 22**
2	**Siddharta in school**	**Sahri Bahlol**		**Ingholt 1957: Fig. 23**
3	**Siddharta rides to school**	**Sikri**	**Lahore**	**Ingholt 1957: Fig. 24**
4	**Siddharta in school**		**Peshawar**	**Ingholt 1957: Fig. 25**
5	**Vasumitra writing on wooden board**	**Unknown fragment**	**unknown**	**Ingholt 1957: 55**
6	**Siddharta in school, sitting on a chair in front of a table, teacher and governess sitting on chairs, later holding an ink pot**	**A damaged relief from Butkara III**		**Swāti 1996: Pl. 115**
7	**Siddharta on ram, going to school, attendants carrying parasol**	**Butkara III**		**Swāti 1996: Pl. 116**

Table 3: The Siddharta's Physical Education

Sr. No	Theme	Found from	Placed in	Source
1	**The state elephant sent to Siddharta**	**Sahri Bahlol**	**Peshawar Museum**	**Ingholt 1957: Fig 54**
2	**Unidentified, Siddharta athletic Competition**		**Lahore Museum**	**Ingholt 1957: Fig. 179**
3	**Wrestlers**	**Sahri Bahlol**	**Peshawar Museum**	**Ibid: Fig. 27**
4	**Wrestlers**	**Sahri Bahlol**	**Peshawar Museum**	**Ibid: Fig 28**
5	**Wrestlers**	**Sikri**	**Lahore Museum**	**Ibid: Fig 29**
6	**Wrestlers**	**Jamal Garhi**	**Peshawar Museum**	**Ibid: Fig 30**
7	**Wrestlers**	**Ranighat**		**Kyoto University Mission 1986: Pl. 22.3:**
8	**Athletic Contest**	**Saidu Sharif I**		**S.246 Faccena 1999/2000. Fig. 3**

Table 4: *Jat* Highlighting the Ascetism/Meditation

Sr. No	Title	*Bk/Jat*	Boddhissatva was born as	Theme	Remarks	Reference
2	**Ekaraja *Jat***	**IV.303**		**Power of meditation**		**Cowell 2002: 9**
3	**Sangha *Jat***	**IV.310**		**Studied at Taxila University, and became an ascetic**	**Ascetic life is shown very attractive, the enjoyment and pleasures of mystic life are described in detail**	**Cowell 2002: 15**
4	**Kasspamandiya *Jat***	**IV.312**			**Description of ascetic life and pleasure groves in jungle**	**Cowell 2002: 24**
5	**Khantivadi *Jat***	**IV.313**		**Studied at Taxila and became an ascetic**		
6	**Lohakumbhi *Jat***	**IV.314**		**Super power of mystic meditation and pleasure grove**		**Cowell 2002: 29**
7	**Tittira *Jat***	**IV.319**		**Studied at Taxila and became an ascetic**	**Great reverence for ascetic life**	**Cowell 2002: 43**
8	**Godha *Jat***	**IV.325**		**False ascetism**		**Cowell 2002: 56**
9	**Rajovada *Jat***	**IV.334**		**Hermitage in Himalaya**		**Cowell 2002: 73**
10	**Ambacora *Jat***	**IV.34**		**False ascetism**	**Ascetic hermitage of leaves**	**Cowell 2002: 90**
11	**Aranna *Jat***	**IV.348**		**Mystic meditation leads to be reborn in Brahma world**		**Cowell 2002: 98**
12	**Anariya *Jat***	**VI.376**	**Born in Brahman family**	**Learned all arts in Taxila and became an ascetic**		**Cowell 2002: 151**
13	**Asanka *Jat***	**VI.380**	**Born in Brahman family**	**Learned all arts in Taxila and became an ascetic**		
14	**Mayhaka *Jat***	**VI.390**			**Blessings of**	**Cowell**

					renunciation	2002: 186
15	Vighasa *Jat*	VI.393		False ascetism		Cowell 2002: 193
16	Ghatta *Jat*	V.355		Power of ascetic meditation	Studied at Taxila	Cowell 2002: 111
17	Baka-Brahma *Jat*	V.405		The power of meditation		Cowell, 2002: 219 (Vol III)
18	Gandhara *Jat*	VII.406	son of the king of Gandhara	Ascetism	People venerated ascetics and built rooms for them	Cowell, 2002: 221 (Vol. III)
19	Jāgara *Jat*	VI.414	born in Brahman family	Learned all arts at Taxila and became an ascetic	Reference to standing and walking meditation throughout night	Cowell, 2002: 243 (Vol. III)
20	Atthasadda *Jat*	VIII.418	born in rich Brahman family	Learned all arts at *Takkaśila* and became a mystic,	charity, veneration for ascetics	Cowell, 2002: 256 (Vol. III)
21	Indriya *Jat*	VIII.423	Son of King's priest	Learned all arts at *Takkaśila* and became an ascetic, attained perfection in meditation		Cowell, 2002: 276 (Vol. III)
22	Dipi *Jat*	VIII.426	Born in wealthy family	religious life and meditation		Cowell, 2002: 285 (Vol. III)
23	Hārita *Jat*	IX.431	born in a rich Brahman family	educated at *Takkaśila*, became an ascetic	An ascetic would not tell a lie to conceal his sin	Cowell, 2002: 295 (Vol. III)
24	Samuggga *Jat*	IX.436				Cowell, 2002: 313 (Vol. III)
25	Tittira *Jat*	IX.438		*Bodhisattva* became a hermit and taught his students in		Cowell, 2002: 319 (Vol. III)

26	**Culla-Bodhi *Jat***	**X.443**	**son of a rich Brahman**	**the forest Studied all sciences and became an ascetic,**	**ascetics are not influenced by anger**	**Cowell, 2002: 13 (Vol. IV)**
27	**Kanhadīpāyana *Jat***	**X.444**	**Born in family of wealthy Brahman**			**Cowell, 2002: 17 (Vol. IV)**
28	**Maha-Mangala *Jat***	**X.453**		**Studied at *Takkaśila* and became a hermit**		**Cowell, 2002: 46 (Vol. IV)**

Table 5: Gandhāra Relief with Ascetic/Extreme Renunciation Themes

Sr. No	Gandhāra Relief	Found from	Placed in	Source
1	**Buddha meeting with Ascetic Brahman**		**Peshawar Museum**	**Ingholt 1957: Fig. 54**
2	**Buddha meeting with the ascetic Brahman visit of sixteen ascetics**	**Takht-i-Bahi**	**Peshawar Museum**	**Ingholt 1957: Fig 106,**
3	**Visit of a group of ascetics**	**Unknown**	**Lahore Museum**	**Ingholt 1957: Fig 107:**
4	**A similar fragment from Chitral**	**Chitral**	**Peshawar Museum**	
5	**Unidentified showing an ascetic in a hut**	**Sahr-I Bahlol**	**Peshawar Museum**	**Ingholt 1957: Fig 171:**
6	**Unidentified showing an ascetic in a hut**	**Sahr-I Bahlol**	**Peshawar Museum**	**Ingholt 1957: Fig 172:**
7	**Fasting Siddharta**	**Sikri**	**Lahore Museum**	**Ingholt 1957: Fig. 52,**
8	**Fasting Siddharta**	**Takht-i-Bahi**	**Peshawar Museum**	**Ingholt 1957: Fig. 53,**
9	**Five Brahman ascetics**			**Swati 1996: Pl. 125 Bk. III 18 & 19**

Table 6: Gandhāra Relief Showing the Donors and the Donations

Sr. No	Theme	Found from	Placed in	Source
1	**State functionaries receiving donations from devotees (three relief panels)**	**Shnaisha**	**Institute of Anthropology and Archaeology Museum, University of Peshawar**	**Swāti 1997: Pl. 230, 231 & 238**
2	**A Princely donor (two relief panels)**	**Butkara I (6501)**		**Swāti 1997: Pl. 65 & 66**
3	**The courtesan Amrapālī donating mango groove, as well as cloth to Buddha**		**Sikri Stupa, Lahore Museum**	**Ingholt 1957: Pl. 136**

Appendix 1

The Didactic Analysis of the 'Oneness Philosophy'

The text starts with a hypothesis, an assumption, or a question for the student, e.g., "*In the beginning, my dear, this world was just being (sat)-one only, without a second*". The statement of problem continues as follows, "…t*o be sure some people say, 'In the beginning this World was just non-being (a-sat)-one only, without a second*". Afterwards the repetition occurs to facilitate the memorization, e.g. "…f*rom that non-Being was produced Being*". Later a further elaboration of the problem occurs as follows, "…*but, verily, my dear, whence this could be? How from non-being could being be produced*?" The commas in the text represent the pauses, as a pause helps the students to clearly comprehend the problem, "…*on the contrary, my dear, in the beginning this World was just being-one only without a second*" (Excerpt taken from Chattopadhyaya 1977: 294).

The teacher-student dialogue proceeds through question-answer technique, using the daily life examples, even in the intricate philosophical matters. For instance:

> ***Uddalaka Aruni said to his son Śvetaketu: "Food, when eaten, becomes divided into three parts; that which becomes divided into three parts. That which is its coarsest constituent becomes the faeces; that which is medium, the flesh; that which is finest, the mind (mana).***
>
> ***"Water, when drunk, becomes divided into three parts; that which is its coarsest constituent, becomes the urine; that which is medium, the blood; that which is finest, the life (prāna)".***
>
> ***"Heat (ghee, butter, etc.), when eaten, becomes divided into three parts; that which is its coarsest constituent, becomes bone; that which is medium, the marrow; that which is finest, the speech (vāc).***
>
> ***"For, my dear, the mind consists of food; life consists of water, speech consists of heat" (*Chattopadhyaya 1977: 297*).***

The dialogue highlights observation and inference. The teacher explains the etymological roots of the complex terms. He helps the student to draw some partial conclusions but leaves space for the independent results. He withdraws from the discussion at a turning point and advises the student to ponder on daily life situations or conduct the experiment. For instance:

> ***"A person, my dear consists of sixteen parts. For fifteen days, do not eat. Drink water at will…….Then for fifteen days he (Śvetaketu) did not eat. After that he approached him, saying, what shall I say, sir? The Rg verses, my dear, the Yajus formula, the Sāman chants. Then he said, 'Verily, they do not come to me'. To him he then said, 'Just as, my dear, a single coal of the size of a fire fly may left over from a kindled fire, but with it the fire would not thereafter burn much-so, my dear, of your sixteen parts a single sixteenth part may be left over, but with it you do not now apprehend the Vedas. Eat; then you will understand from me"***
>
> ***"Then he ate. So then he approached him. Then what so ever he asked him, he answered everything"……* (Chattophyaya 1977: 297).**

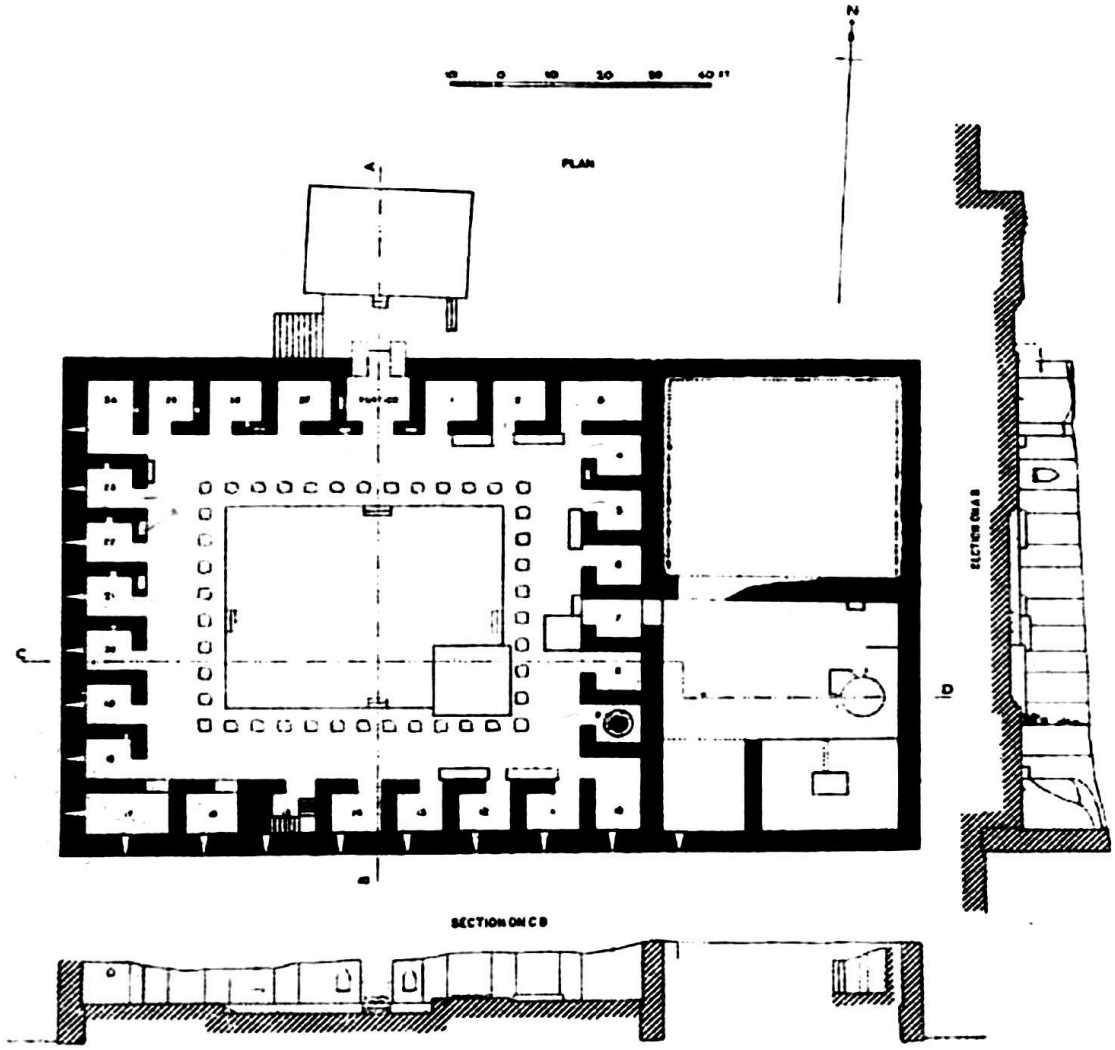
The text is rich in analogy and comparison. It keeps a logical connection, and emphasizes the experimental method.

Appendix 2

The Wooden Writing Boards

The wood was used as a writing material since antiquity. The Assyrian and Syrian reliefs reveal scribes holding the wooden tablets. Homer also describes the wooden tablets. We find the inscribed wooden tablets in the Roman civilization by 4th *c.* CE. Aurel Stein recovered thousands of the Kharoṣṭhi documents on wooden tablets from Takalmakan, Khotan. The tablets were cut into varying sizes and shapes (Stein 1901: 569; Salamon 1998: 132). Wood was the most readily available material and could be easily decorated by painting or carving. The writing practice was done on the wooden tablets till early 20th century. Such wooden slates were used in Pakistan till 1970s, from whence they lost their popularity due to availability of the cheap paper.

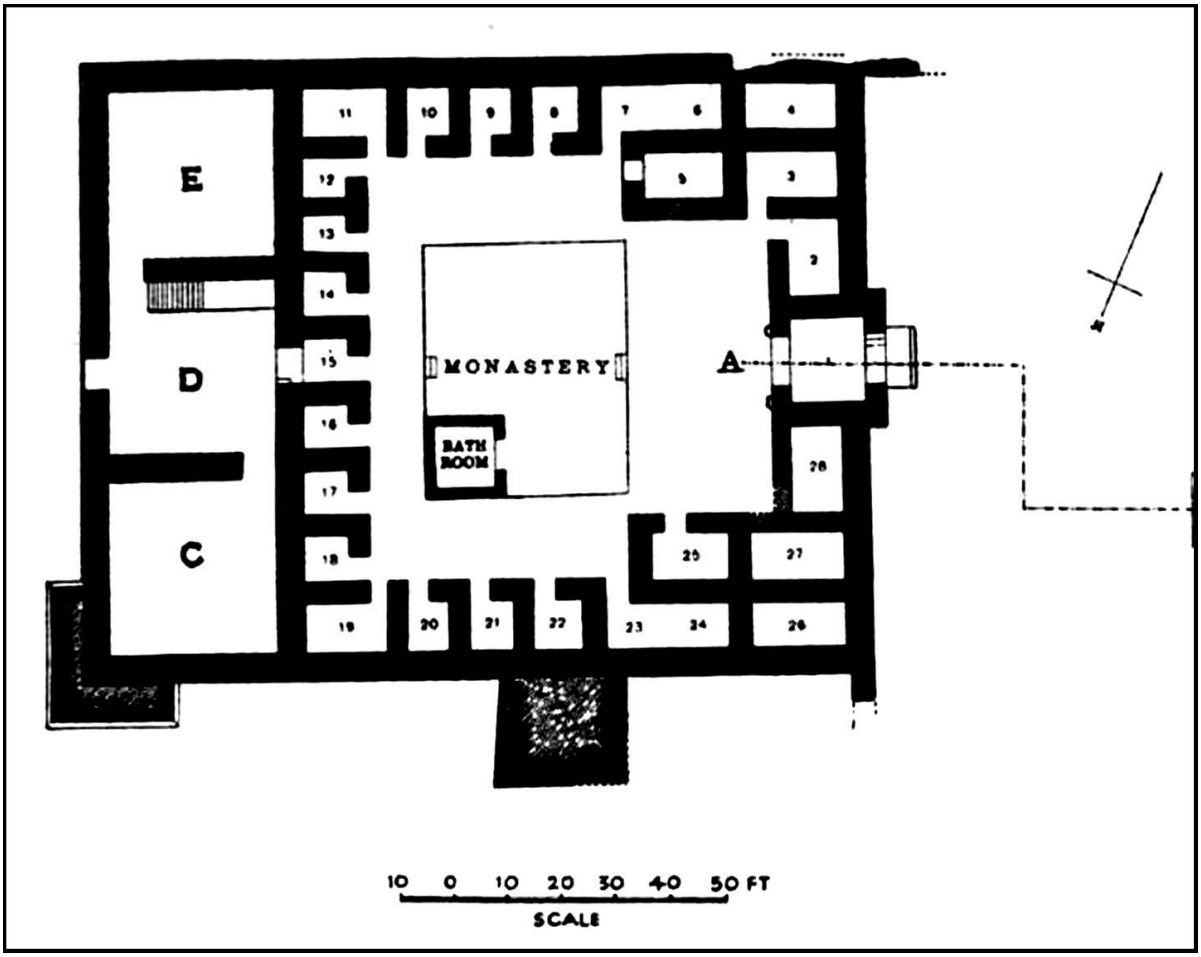
Fig 1



(*a*) Plan and sections of monastery.

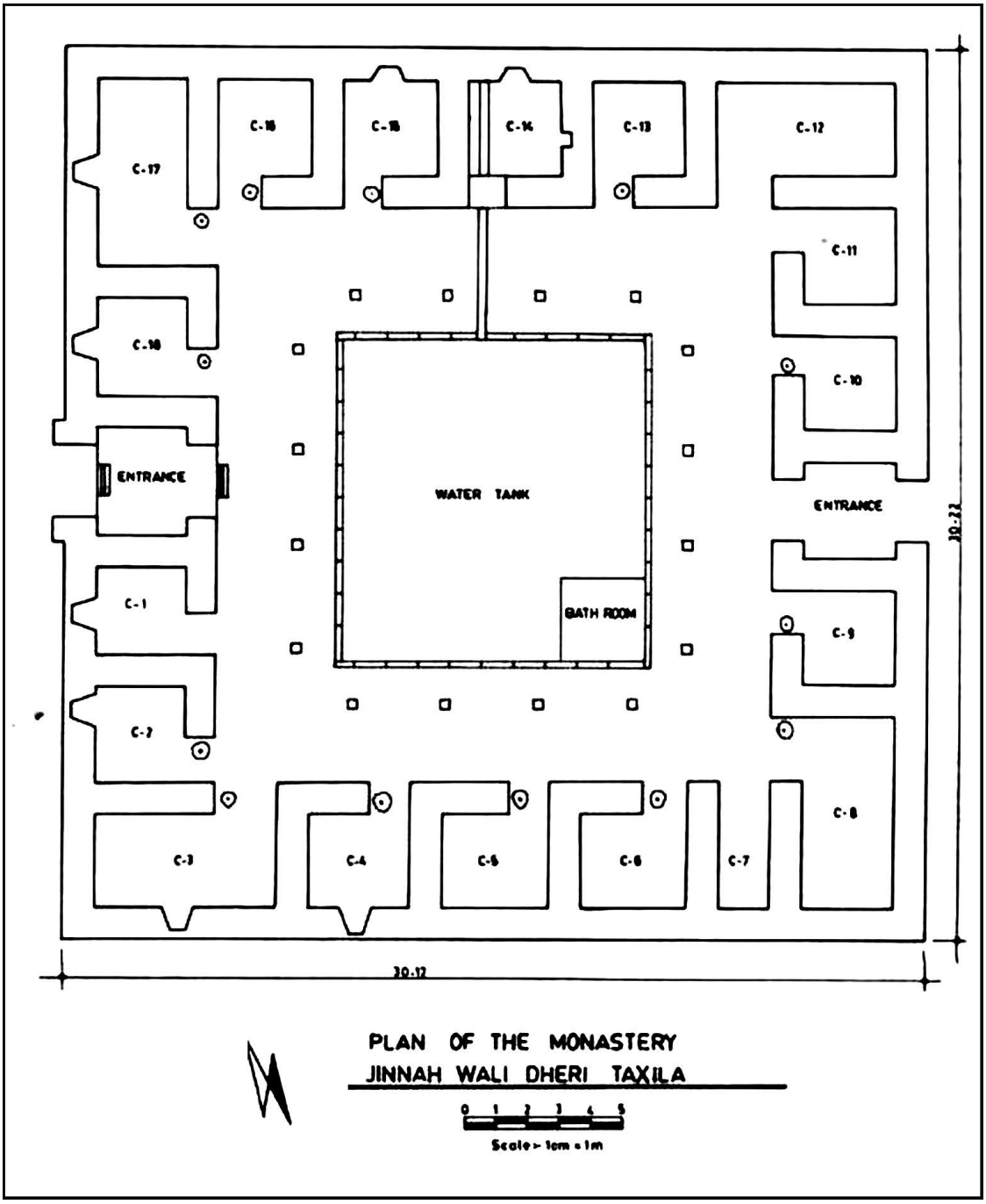
General Lay out of the Mohra Moradu Monastery (Marshall 1951: pl. 93a)

Fig. 2



Bhamala Monastery showing raised platform, marked as 'Bathroom' in Marshall 1951 (pl. 114)

Fig. 3



Plan of the Monastery of Jinnah Wali Dheri (Source Ashraf & Mehmoodh ul Hassan 2004: Fig 7)

a. Prince Siddharta in School, Marjanai, Swat. 2nd-3rd CE
(Courtesy: Peshawar University Museum. (MJN-1983-1-87)

b**. Prince Siddharta, studying from his teacher. Shah Shamsi Khan**
2nd-3rd CE (courtesy: Dir Museum. Acc. No. 836)

a. The scene showing wrestlers, 1st-4th CE, Chatpat (Courtesy: Dir Museum)(689)

b. Lotus Sutra Pillar, Fa Hai Temple, Beijing, Ming Dynasty (15th CE)

a. **Drum. Fayun Si, Beijing, T'ang Dynasty (7th-9th CE)**

b. Drum and Hammer, Fayun Si, T'ang Dynasty (7th-9th CE)

a. The fish bells in Fayun Si, Beijing, T'ang Period (7th-9th CE)

b. Qixia Temple, Nanking, China: the monk keeps the wooden block and strike it as a symbol for turning the page

a. The Aramaic Inscription built into the wall of Block F, Sirkap (Courtesy: Taxila Museum)

b. The Earthen Inkpot (Courtesy: Taxila Museum. 5981 sk/12.1097)

a**. The Earthen Inkpot (courtesy: Taxila Museum. *dia*. 1.9 cm. 4851. Sk' 29-47)**

b. Metal Inkpots (Courtesy: Taxila Museum. 5887 sk/26 2243, 472680, 2827 sk 28.107, no number, from left to right)

a. Buddha visits an ascetic. Unknown provenance in Gandhāra *ca*. 100 CE
(Courtesy: Peshawar Museum. PM 2793. Schist 41x50 x 7 cm)

b. Fasting Buddha Śakyamuni, Unknown provenance in Gandhāra, *ca*. 3rd-5th CE. Schist
(Courtesy: Metropolitan Museum of Arts. USA. 1987.218.5)

a. **The courtyard of Dharmarajika monastery, Taxila**

b. Shahpur well and the rectangular water tank

a. The Platform besides the Shahpur Well

b. Mohra Moradu well showing platform and the small water tank

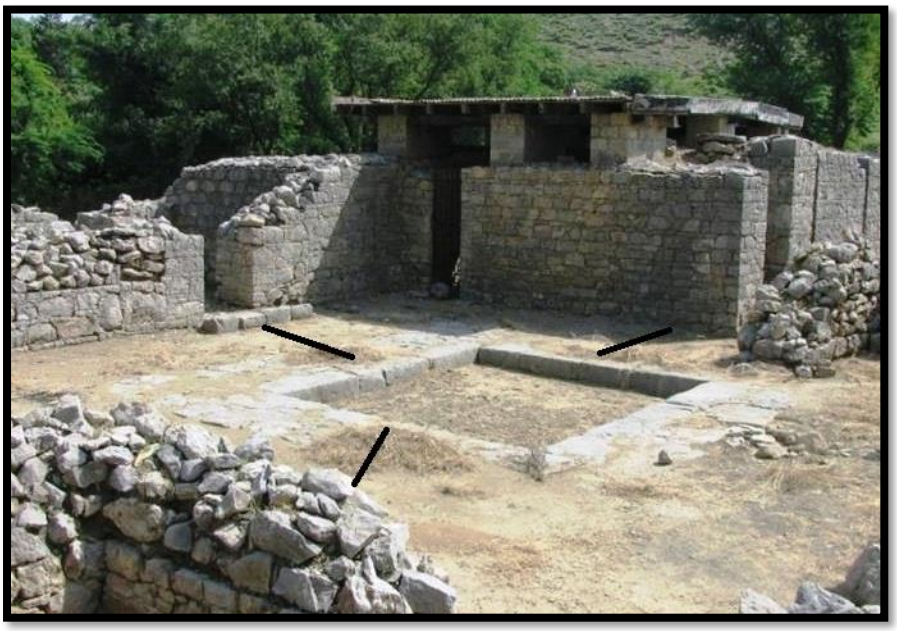
a. Manikyala Stupa Well 1: External View

b. Manikyala Stupa Well 2: An Internal View

a. **Manikyala Stupa Well 2: Showing the small water tank**

b. **Manikyala Stupa water pond 2**

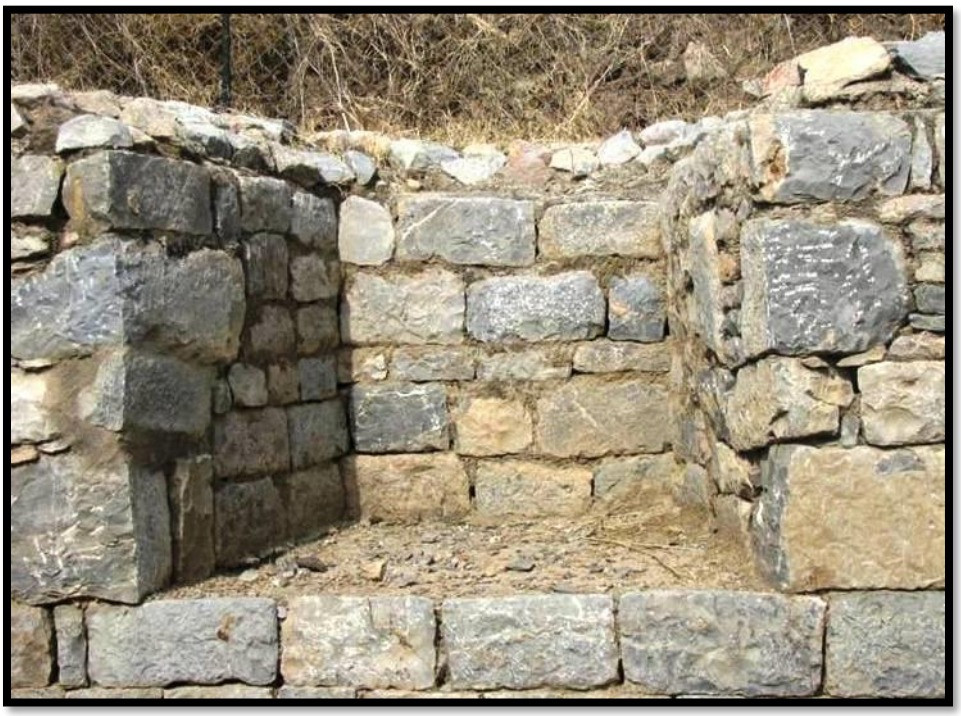
a. Mohra Moradu Monastery, Taxila:
showing the stones bases for the *viranda* pillars



b**. Pippala monastery: showing the sunken courtyard**
and the wide *verandas* around it

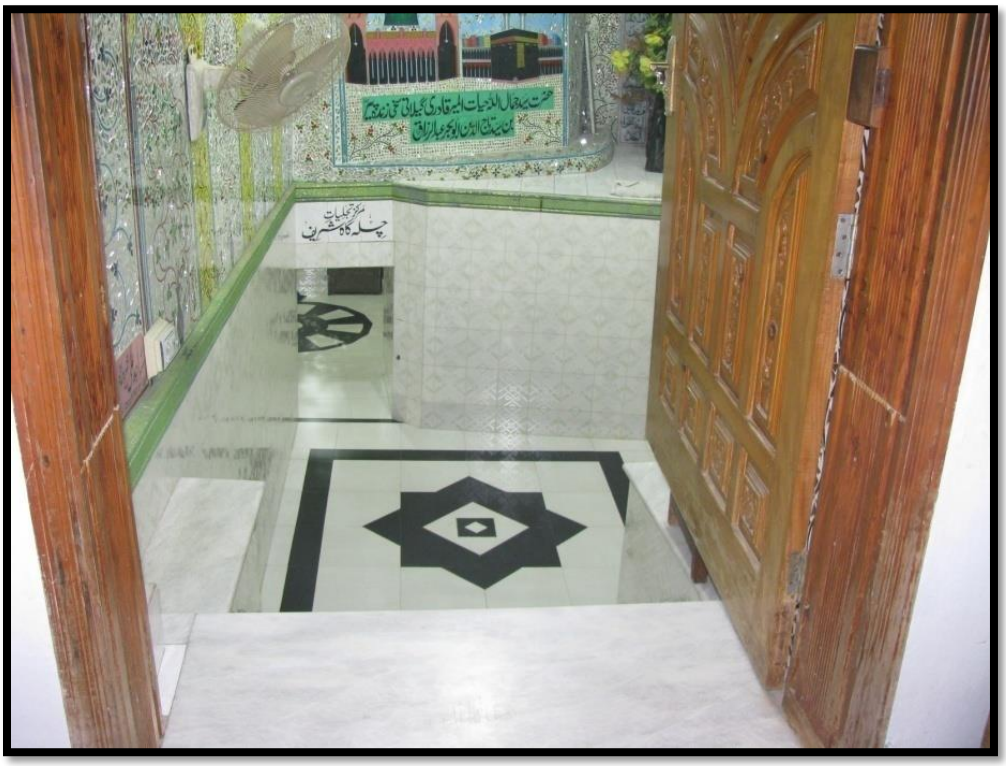
a. **Jinnah Wali Dheri monastery, Taxila: Showing wall thickness of the monks' cells**

b. Jinnah Wali Dheri monastery, Taxila: Showing wall thickness of the monks' cell



a. The sunken space in the wall of a monks' cell, Jinnah Wali Dheri, Taxila

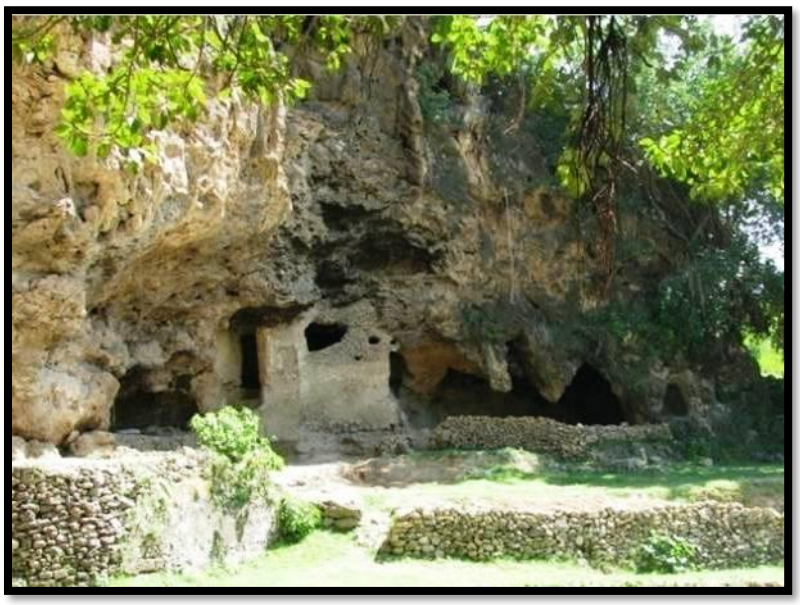
b. The Passage leading to the sunken cell, Pippala monastery, Taxila



a. **The passage leading to the sunken meditation cell of Syed Jamal Allah Qadri Gilani (*Zinda Peer*) Hassan Abdal, District Rawalpindi**

b. The underground chamber in the Tomb of Kalyam Sharif

a. **Mohra Moradu Cave (12 meters wide from north to south)**

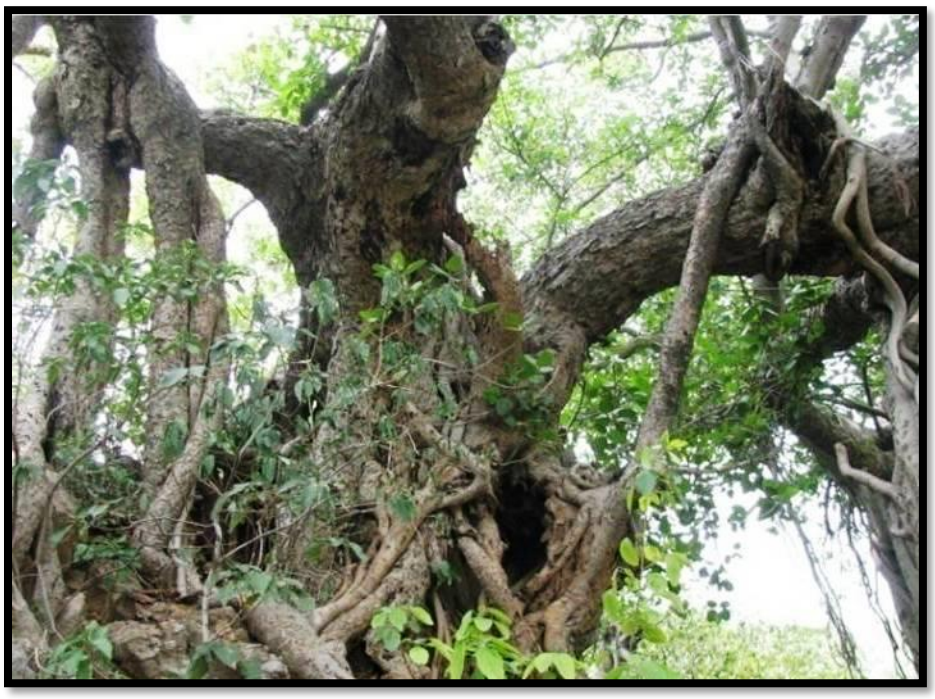


b. **Shah Allah Ditta Cave 2: showing arched entrances to the cave**

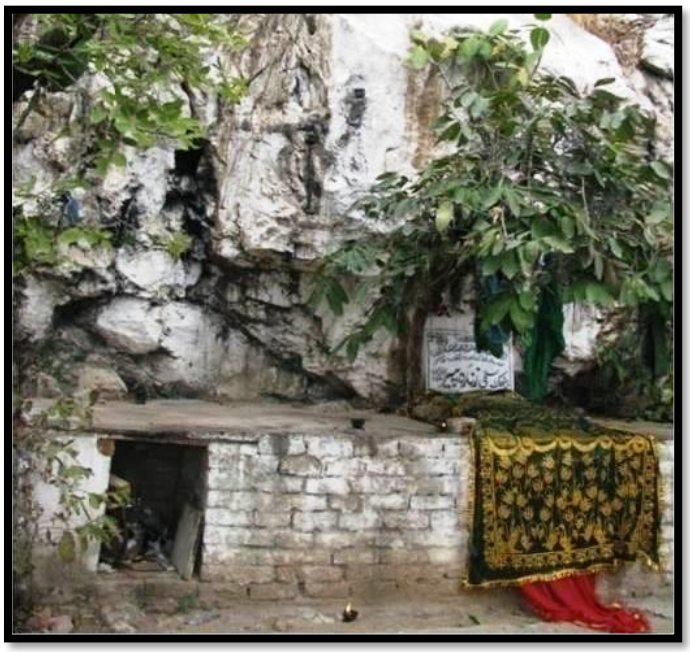
a. **The raised plate-form (0.80 cm wide) in Shah Allah Ditta Cave 1, Islamabad**

b. **The meditation chamber of Syed Jamal Allah Qadri Gilani, showing the raised platform (2.30 x 0.80 cm)**

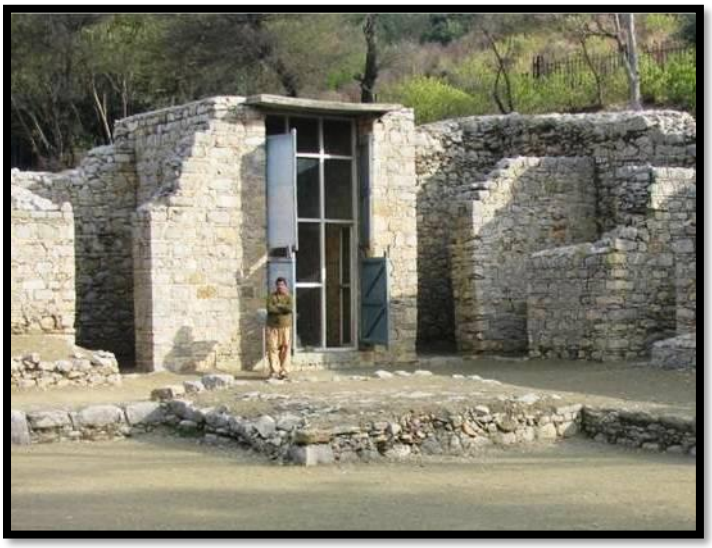
a**. Shah Allah Ditta Cave 2: Internal View**



b. The sitting place of *Zinda Peer*, Saidpur Village, Islamabad: showing the Gigantic Banyan Tree



a. The sitting/meditation place of *Zinda Peer*, Saidpur Village, Islamabad



b. The square platform in the courtyard of Mohra Moradu Monastery, Taxila

a. The walled structure in southeastern corner of court of cells, Takht-i-Bahi Monastery, District Mardan

b**. The square structure lying above a votive stupa in south of the stupa court, Takht-i-Bahi**

a. The preserved meditation square platform in northeastern corner of Kalyam Sharif. *ca*. 19th CE

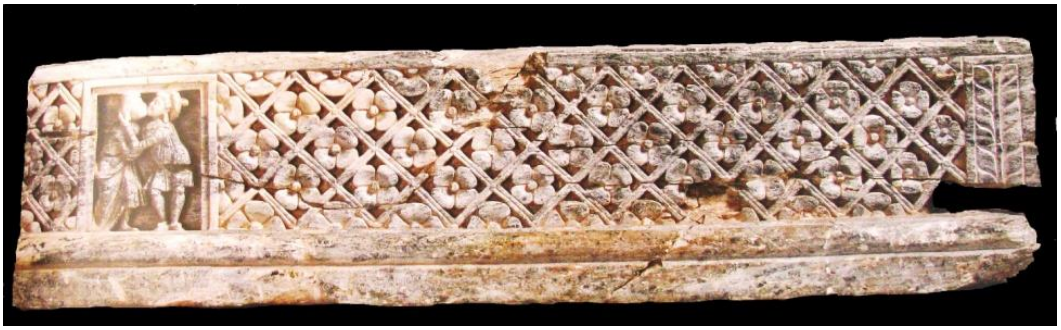
b. The preserved square seat of Baba Kalyam Sharif (19th CE)

a. The preserved meditation (square) seat of Baba Abdus Sitar Chishti, Kalyam Sharif (19th CE)

b. **The sunken courtyard, Monks' Quarters, Qixia Temple, Nanking, China**

a. **Surgical Instruments, Sirkap, 2nd BCE-2nd CE (Courtesy: Taxila Museum. 2656.sk. 22.91, 2409.sk.28-1122, 2412. Sk.26.321, etc. from left to right)**

b. The Dining Hall of Qixia Temple, Nanking, Beijing, China



a**. The decorative band, revealing stone imitation of wood carving, Nimogram, Swat, Schist, 15x62x55 cm; Swat Museum, Saidu Sharif, inv. No. NG 388. (Source: The Buddhist Heritage of Pakistan 2009: cat no. 181)**

b. The schist stone reliquary. Butkara I, 2nd-3rd CE (Courtesy: Swat Museum. Saidu Sharif)

a. The electric lathe machine. Modern town of Tibian, Taxila, Pakistan

b**. The traditional measuring tool for circular objects. Tibian, Taxila, Pakistan**

a. The stone worker at the modern town of Tibian, Taxila, Pakistan

b. A stone worker preparing the replica of Gandhāra relief. Modern town of Tibian, Taxila, Pakistan

a. The stone engraving. Modern town of Tibian, Taxila, Pakistan

b. The modern tools used for delicate relief carving. Modern town of Tibian, Taxila, Pakistan

a. **The thick plaster on the walls of a monastic cell, Badalpur, Taxila, Pakistan**

b. **General view of Mohra Moradu monastery, Taxila, Pakistan**

a. **Ritual Incense Burner, Unknown provenance in Gandhāra,**
***ca*. 6th century CE, Bronze (Courtesy: Metropolitan Museum of Arts, USA. 218.8a-c)**

b. Reliquary in the form of stupa, Unknown provenance in Gandhāra,
***ca*. 4th-5th CE, Bronze (Courtesy: Metropolitan Museum of Art. 387a, b)**

a. Bipartite pendant with Erotes on sea creatures. Sirkap, Block D', Stratum II, Taxila, 1st CE Gold.h. 10.92 cm (Courtesy: National Museum of Pakistan, Karachi. Sk. 1507-1)

b. Dipankara Jatāka. Swat Valley.*ca* 2nd CE, Scist with gold leaf, 22.2 x 21.3 cm (Courtesy: Metropolitan Museum of Arts. 1998.491)

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a. **Molds for inlay on jewelry. Sirkap. 2nd BCE-2nd CE (Courtesy: Taxila Museum. 534B BM'24-279)**

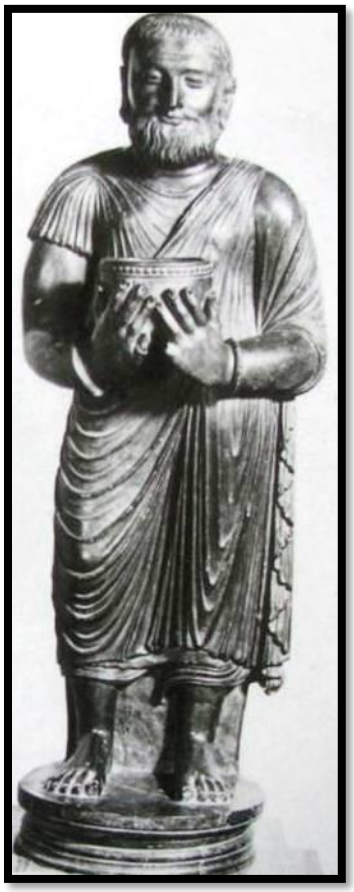
b. Jewelry mold. Sirkap 2nd BCE-2nd CE (Courtesy: Taxila Museum. 7.8 x 3.2 cm. 3938.sk.85)

a**. Gold smith's anvils. Sirkap 2nd BCE-2nd CE (Courtesy: Taxila Museum)**

b. Gold smith's tongs and anvils. Sirkap 2nd BCE-2nd CE
(Courtesy: Taxila Museum. 704, G, 3k'24.737 from left to right)

a. The gold smith tools, modern city of Taxila, Pakistan

b. Relief Panel showing donations. Swat. British Museum.*ca* 2nd CE. Schist (Asia 1902.10-2.29) (Source: Behrendt 2007: Fig. 97)



a. Donor. Gandhara.2nd-3rd CE. Dark Schist. National Museum.
New Dheli (Source Rhie 2002b: 4.81e)

b. Śyāma *Jātaka.* Butkara-III(Swāti 2007: Pl. 13)

a. ***Caitya arches*** **in Gandhāra relief.Butkara-III 125. (Source:Swāti 2007: Pl. 2)**

b. **Wooden door jambs in Gandhāra relief. Dīpaṅkara *Jatāka*.Butkara-III 59/62 (Courtesy: Swat Museum)**